

29 CSBMM XVII CIASEM



OLINDA-PE, BRAZIL
NOVEMBER 7TH TO 10TH, 2023



PROGRAM BOOK

29th Congress of the Brazilian Society of Microscopy and Microanalysis and the XVII Interamerican Congress on Microscopy

REALIZATION



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Paul Kotula - CIASEM President

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Sponsors Diamond



Sponsors Gold



Sponsors Silver



Sponsors Bronze



Supported by



Rooms per symposium

SYMPOSIA	ROOM
PT - Plenary talks	GERTRUDE REMPFER
GMS1 - Advances in Scanning Probe Microscopy	HERTHA MEYER
GMS2 - Electron microscopy, spectroscopy and simulation of nanostructures and engineering materials	GERTRUDE REMPFER
GMS3 - Computational microscopy advances and perspectives	JUNE ALMEIDA
GMS4 - Microscopy and Microanalysis in Industry	HERTHA MEYER
GMS5 - Nano-bio Interface	GERTRUDE REMPFER
LSS1 - Educational and capacity building in microscopy	RITA LEVI-MONTALCINI
LSS10 - Microscopy imaging of pathogens, host and their interactions II	RITA LEVI-MONTALCINI
LSS2 - Microscopy research applied to animal cells	GERTRUDE REMPFER
LSS3 - 3D Structures from In-cell structural biology to ultrastructure	RITA LEVI-MONTALCINI
LSS4 - Cryo-EM of macromolecular assemblies	HERTHA MEYER
LSS5 - Agriculture and Environment-Related research exploring microscopy tools	RITA LEVI-MONTALCINI
LSS6 - Super-resolution microscopy	HERTHA MEYER
LSS7 - Microscopy applied to Medical Science	RITA LEVI-MONTALCINI
LSS8 - Live Imaging of Cells, Tissues and Organisms	RITA LEVI-MONTALCINI
LSS9 - Microscopy imaging of pathogens, host and their interactions I	GERTRUDE REMPFER
MS1 - Electron microscopy and spectroscopy of nanostructures and engineering materials	GERTRUDE REMPFER
MS2 - Advanced Imaging and Spectroscopy for materials applied to Sustainable processes	JUNE ALMEIDA
MS3 - Applications of focused ion beam instrumentation to materials	JUNE ALMEIDA
MS4 - 4D-STEM	HERTHA MEYER
MS5 - Microscopy in: Metallurgy and Mineralogy/Ceramics, metals, and minerals/Biomaterials	GERTRUDE REMPFER
MS6 - In-situ Microscopy	JUNE ALMEIDA
MS7 - Radiation effects in materials	JUNE ALMEIDA
SS1 - Women in Microscopy	JUNE ALMEIDA
TL - Technical lecture	JUNE ALMEIDA

Summary table of activities

	November 6th	November 7th	
09:00 - 10:00	PRE-CONGRESS COURSES	PRE-CONGRESS COURSES	
10:00 - 10:20			
10:20 - 12:00			
12:00 - 12:30	Lunch	Lunch	
12:30 - 13:00			
13:00 - 14:00	PRE-CONGRESS COURSES		PRE-CONGRESS EVENT Bridging Borders in BioImaging: A Global Workshop on Advancing Imaging Technologies through your Network and Imaging Communities
14:00 - 14:20		Registration	
14:20 - 15:20			
15:20 - 16:30			
16:30 - 17:00			
17:00 - 17:30		OPEN PLENARY Daniel Ugarte, UNICAMP-Brazil	
17:30 - 18:00			
18:00 - 18:30	Welcome Reception		
18:30 - 19:00			
19:00 - 19:30			
19:30 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			

Summary table of activities

	November 8th		
09:00 - 10:00	PLENARY TALK 2 Mary Grace Burke, Idaho National Laboratory-USA		
10:00 - 10:20	Coffee Break and Exhibition		
10:20 - 12:00	MATERIALS SYMPOSIUM I MATERIALS SYMPOSIUM II GENERAL MICROSCOPY SYMPOSIUM I LIFE SCIENCES SYMPOSIUM I		
12:00 - 12:30	Technical lecture		
12:30 - 13:00	Lunch		
13:00 - 14:00			
14:00 - 14:20	Elevator Pitch 1		
14:20 - 15:20	PLENARY TALK 3 Joachim Mayer, RWTH Aachen University-Germany		
15:20 - 16:30	MATERIALS SYMPOSIUM III MATERIALS SYMPOSIUM IV LIFE SCIENCES SYMPOSIUM II LIFE SCIENCES SYMPOSIUM III		
16:30 - 17:00			
17:00 - 17:30	Technical lecture		
17:30 - 18:00	Poster Session	CIASEM ASSEMBLY	Happy Hour
18:00 - 18:30			
18:30 - 19:00			
19:00 - 19:30	Confraternization		
19:30 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			

	November 9th		
09:00 - 10:00	PLENARY TALK 4 Claire M. Brown, McGill University-Canada		
10:00 - 10:20	Coffee Break and Exhibition		
10:20 - 12:00	MATERIALS SYMPOSIUM V MATERIALS SYMPOSIUM VI LIFE SCIENCES SYMPOSIUM IV LIFE SCIENCES SYMPOSIUM V		
12:00 - 12:30	Technical lecture		
12:30 - 13:00	Lunch		
13:00 - 14:00			
14:00 - 14:20	Elevator Pitch 2		
14:20 - 15:20	PLENARY TALK 5 Grant Jensen, Brigham Young University-USA		
15:20 - 16:30	MATERIALS SYMPOSIUM VII GENERAL MICROSCOPY SYMPOSIUM II LIFE SCIENCES SYMPOSIUM VI LIFE SCIENCES SYMPOSIUM VII		
16:30 - 17:00			
17:00 - 17:30	Technical lecture		
17:30 - 18:00	Poster Session	Pint of Microscopy	Happy Hour
18:00 - 18:30			
18:30 - 19:00	SBMM ASSEMBLY		
19:00 - 19:30			
19:30 - 20:00			

	November 10th	
09:00 - 10:00	PLENARY TALK 6 Hellen Ishikawa-Ankerhold, Ludwig Maximilians Universität-Germany	
10:00 - 10:20	Coffee Break and Exhibition	
10:20 - 12:00	GENERAL MICROSCOPY SYMPOSIUM III GENERAL MICROSCOPY SYMPOSIUM IV LIFE SCIENCES SYMPOSIUM VIII LIFE SCIENCES SYMPOSIUM IX	
12:00 - 12:30	Technical lecture	
12:30 - 13:00	Lunch	
13:00 - 14:00		
14:00 - 14:20	Elevator Pitch 3	
14:20 - 15:20	PLENARY TALK 7 Marcos Farina, UFRJ-Brazil	
15:20 - 16:30	SPECIAL SYMPOSIUM I GENERAL MICROSCOPY SYMPOSIUM V LIFE SCIENCES SYMPOSIUM X SPECIAL SYMPOSIUM II	
16:30 - 17:00		
17:00 - 17:30	Technical lecture	
17:30 - 18:00		
18:00 - 18:30	Poster Session	Happy Hour
18:30 - 19:00	Awards and Closing Ceremony	

Pre-event agenda

International CryoEM Symposium in Rio

Date: 1st to 3rd November 2023

Location: Centro Nacional de Biologia Estrutural e Bioimagem, Unidade 3 - Microscopia Avançada (CENABIO 3 - UFRJ).

Universidade Federal do Rio de Janeiro UFRJ

Unidade de Microscopia Avançada.

Av. Carlos Chagas Filho, 373 - Centro de Ciências da Saúde - CCS - Bloco M - CENABIO

Cidade Universitária - Rio de Janeiro, RJ

Welcome to the International CryoEM Symposium in Rio de Janeiro, Brazil. This exciting event is set to take place from November 1st to 3rd, 2023 and promises to be an incredible opportunity to explore the latest developments in cryo-electron microscopy. We are thrilled to bring together some of the most renowned researchers and experts in the field of cryoEM from around the world to share their insights, discoveries, and knowledge. The symposium is all set to explore different areas of cryomicroscopy, including quick freeze of biological samples, freeze fracture, freeze-etching, cryo-scanning microscopy, freeze-substitution, single particle analysis, cryolamella preparation and cryo-electron tomography. This Symposium was idealized to celebrate the inauguration of the Cryo Microscopy Sector of the National Center for Structural Biology and Bioimaging (CENABIO), that is localized at the Federal University of Rio de Janeiro (UFRJ). The CENABIO already count with an Advanced Microscopy Facility and the expansion of this, with implementation of a dedicated cryomicroscopy sector, is of great importance for Brazilian science.

Organization: SBMM; UFRJ and CENABIO

Contact: sbmm@sbmm.org.br

More details: https://www.instagram.com/cryoem_symposium/

29 CSBMM XVII CIAEM
November 1st to 3rd, 2023

Pre-Congress Event

INTERNATIONAL CRYOEM SYMPOSIUM IN RIO

November 1st to 3rd, 2023

Centro de Ciências da Saúde - Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil

Invited Speakers

BRUNO HUMMEL University of Okinawa-Japan
 CASTER SACHSE Ernst Ruska Microscopy Center, Germany
 GRANT JENSEN Brigham University, EUA
 JOHN HEUSER Washington University, EUA
 JOSE VALPUESTA Universidade de Madrid, Spain
 JUERGEN PLITZKO Max Planck Institute, Munich, Germany
 MARIN VAN HEEL LNNAO- Campinas, Brazil
 MARK ELLISMAN University of California, San Diego- EUA
 MATHIAS POGE Max Planck Institute, Munich, Germany
 RODRIGO PORTUGAL LNNAO- Campinas, Brazil
 YI-WEI CHANG University of Pennsylvania, EUA

Registrations are open!!
<https://www.eventweb.com.br/csbmm-ciasem2023/home-event/>

Students, PosDocs, Technicians	R\$ 95,00
Professionals	R\$ 200,00

Contact: cryoem_symposium@gmail.com
[/cryoem_symposium](https://www.instagram.com/cryoem_symposium/) [/cryoem_symposium](https://www.facebook.com/cryoem_symposium)

Logos: UFRJ, CENABIO, IBCCF, SBMM

Tratamento de imagens e colorização pelo Photoshop - curso básico: demonstrativo e prático

Data: Segunda-feira 06 de novembro de 2023

Horário: 13:30h às 17 horas (on-line)

Requisitos: Obrigatório ter o Photoshop instalado, preferencialmente o CS6 Ementa: O que ilegal e legal no tratamento de imagens de microscopia para teses e publicações como melhorar a qualidade de imagens microscópicas para publicação dentro da legalidade. Como colorizar imagens biológicas de microscopia e Treinamento prático.

Professora: Dra. Marlene Benchimol
(marlenebenchimol@gmail.com)

10 vagas - online



Introduction to 2D and 3D Image Processing and Analysis

Date: November 6th (Monday) between 9AM-12PM and 1PM-5PM and November 7th (Tuesday) between 9AM to 12PM.

Location: FPE (more details soon)

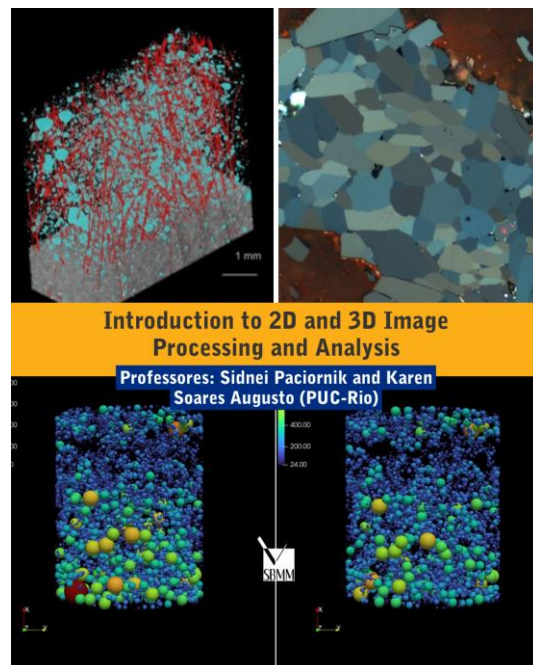
This mini-course presents the principles of image processing and analysis methodology applied to 2D and 3D images obtained by different microscopy techniques. The traditional sequence - acquisition, pre-processing, segmentation, post-processing, measurements, and classification - will be presented. New features based on AI and Deep Learning will also be discussed. No previous knowledge is needed. The short course is appropriate for both materials and biology researchers.

Requirement: bring your computers

Professors: Sidnei Paciornik (PUC-Rio) and Karen Soares Augusto (PUC-Rio)

Contact: sidnei@puc-rio.br and saugustokaren@gmail.com

Vacancies: 30



Introduction to Scanning Electron Microscopy

Date/hour: November 6th (Monday) between 9AM to 5PM and November 7th (Tuesday) between 9AM to 12PM.

Location: LACMAT-LAMICRO/CETENE (Recife/PE).

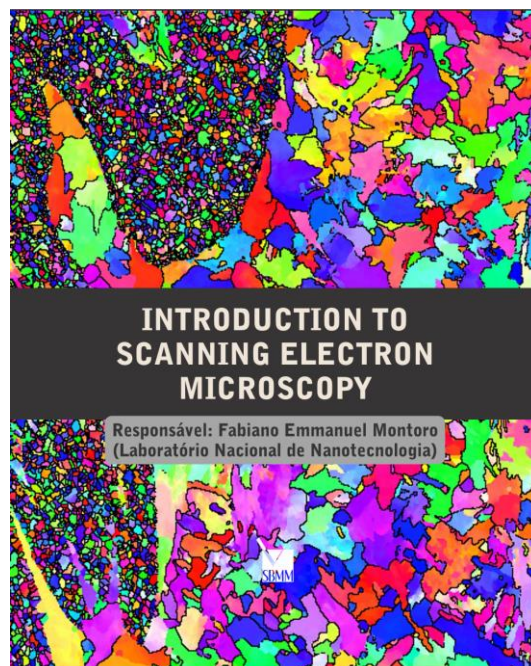
Professors: Fabiano Emmanuel Montoro (LNNano – Laboratório Nacional de Nanotecnologia)

Vacancies: 20 - in person (Target Audience: Undergraduate and postgraduate students and technicians)

Objectives: Theoretical and experimental (demo) basic course of scanning electron microscopy (SEM), offering introductory knowledge about the technique and its applications.

Duration: 10 hours.

Contact: fabiano.montoro@lnnano.cnpem.br



Introduction to Transmission Electron Microscopy

Date/hour: November 6th (Monday) between 9AM to 5PM and November 7th (Tuesday) between 9AM to 12PM.

Location: LACMAT-LAMICRO/CETENE (Recife/PE).

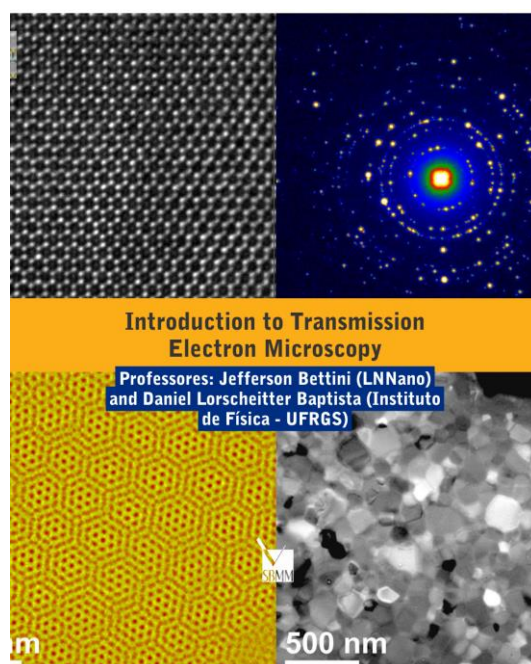
Professors: Jefferson Bettini (LNNano – Laboratório Nacional de Nanotecnologia) and Daniel Lorscheitter Baptista (Instituto de Física - UFRGS)

Vacancies: 20 - in person (Target Audience: Undergraduate and postgraduate students and technicians)

Objectives: Theoretical and experimental (demo) basic course of Transmission Electron Microscopy (TEM). This course will provide knowledge to plan their experiments, parameters to be used to obtain their results in the microscopy and interpretation of the data set.

Duration: 11 hours.

Contacts: jefferson.bettini@lnnano.cnpem.br and dbaptista@gmail.com



CellProfiler course - Learn to turn bioimages into data

Date: November 6th (Monday) between 9AM-12PM and 1:30PM-5PM.

Location: Laboratório de Imunopatologia Keizo Asami - Av. Prof. Moraes Rego, 1235 - Cidade Universitária, Recife - PE - CEP: 50670-901 - <https://www.ufpe.br/ilika>

Professors: Mario Costa Cruz (USP) and Dra. Angela Castoldi (UFPE)

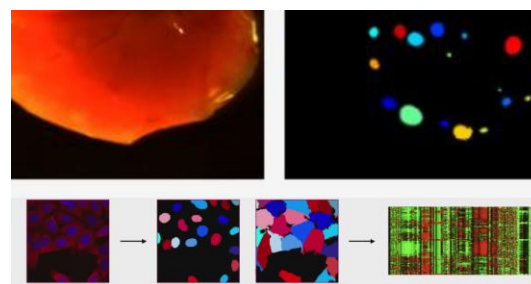
Vacancies: 20

Requirement: Laptop (Mac, Linux or Windows)

Objective: Learn to turn bioimages into data using the free, open source software CellProfiler (<https://cellprofiler.org/>).

This interactive workshop will go over the basics of creating a CellProfiler pipeline from start to finish within a focus on understanding how to adapt CellProfiler pipelines and module settings to new datasets. We will also demonstrate how to use the new CellProfiler plugins for deep learning-based segmentation with cellpose and stardist. The plugins runCellpose and runStardist make these algorithms more accessible and allow for their inclusion in existing CellProfiler workflows. The workshop is an introduction to CellProfiler and targeted to beginners with very little or no experience with the software.

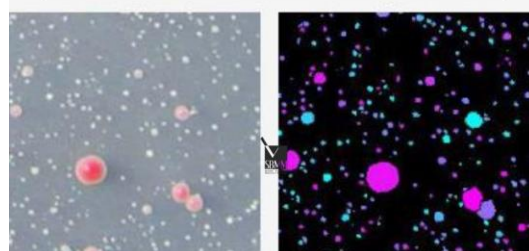
Contact: mccruz@usp.br



CELLPROFILER COURSE

Learn to turn bioimages into data

Professor: Mario Costa Cruz (USP) e Dra. Angela Castoldi (UFPE)



The molecular revolution - Introduction to cryoEM Single Particle Analysis

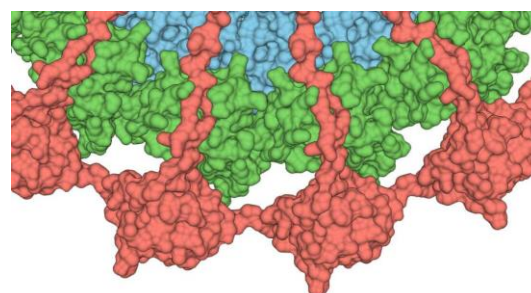
Date/hour: Monday (11/06 - 13:00-17:00 and 08:30 - 12:00).

Location: UFPE

Professors: Leonardo Talachia Rosa (USP) and Germán Sgro (USP)

Vacancies: 30

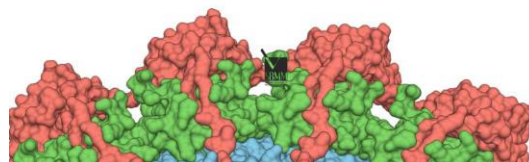
Objective: Cryo electron microscopy has revolutionized the field of structural biology in the last decade, as it allowed the near-atomic reconstruction of (multi)protein complexes in a state very close to the native state, leading to answers



THE MOLECULAR REVOLUTION

Introduction to cryoEM Single Particle Analysis

Lecturers: Leonardo Talachia Rosa and Germán Sgro



to biological questions hitherto unexplored. This mini-course aims to give an overview of this powerful technique, with a focus on characterization by Single Particle Analysis. Topics such as the potential applications and limitations of the technique, the necessary infrastructure, sample preparation and computational processing of the collected data will be addressed, so that the student can take the first steps towards the use of the technique in their research projects.

Contact: leotrosa@unicamp.br and gsgro@usp.br

Plenary talks

TUESDAY, NOVEMBER 07

SESSION PT-1

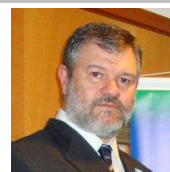
18:00 - 19:30 - GERTRUDE REMPFER

Chair: Rodrigo Prioli Menezes (PUC);

18:30 - PT-1.1

New paradigms for the study of nanomaterials by advanced TEM methods

Daniel Ugarte¹; ¹Universidade estadual de Campinas



WEDNESDAY, NOVEMBER 08

SESSION PT-2

09:00 - 10:00 - GERTRUDE REMPFER

Chair: Guillermo Solórzano-Naranjo (HARVARD);

09:00 - PT-2.1

The Use of Correlative Microstructural Characterization to Advance Our Understanding of Irradiation Damage in Steels – A Metallurgist’s Perspective

Mary Grace Burke¹; ¹Idaho National Laboratory



SESSION PT-3

14:20 - 15:20 - GERTRUDE REMPFER

Chair: Paul Kotula (SANDIA NATIONAL LABS);

14:20 - PT-3.1

The TOMO Project – Integrating a Fully Functional Atom Probe in an Aberration-Corrected TEM

Joachim Mayer¹; ¹RWTH Aachen University



THURSDAY, NOVEMBER 09

SESSION PT-4

09:00 - 10:00 - GERTRUDE REMPFER

Chair: Kildare Miranda (UFRJ);

09:00 - PT-4.1

Global Bioimaging Networks are Changing the Science Ecosystem

Claire Brown¹; ¹McGill University



SESSION PT-5

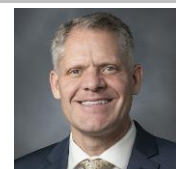
14:20 - 15:20 - GERTRUDE REMPFER

Chair: Rodrigo Portugal (CNPEM);

14:20 - PT-5.1

ELECTRON CRYOTOMOGRAPHY OF CELLS: PROGRESS AND POTENTIAL

Grant Jensen¹; ¹Brigham Young University



FRIDAY, NOVEMBER 10

SESSION PT-6

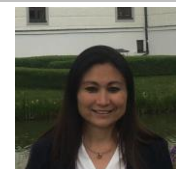
09:00 - 10:00 - GERTRUDE REMPFER

Chair: Hernandes Faustino de Carvalho (UNICAMP);

09:00 - PT-6.1

INTRAVITAL MICROSCOPY AS A POWERFUL TOOL TO STUDY LEUKOCYTE TRAFFICKING IN INFLAMMATION

Hellen Ishikawa-Ankerhold¹; ¹Ludwig-Maximilians-Universität München



SESSION PT-7

14:20 - 15:20 - GERTRUDE REMPFER

Chair: Andre Linhares Rossi (CBPF);

14:20 - PT-7.1

**Temporal and spatial scale evaluations in transmission electron microscopy:
contributions to Biomineralization**

Marcos Farina¹; ¹Universidade Federal do Rio de Janeiro



GMS1 - Advances in Scanning Probe Microscopy

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION GMS1

10:20 - 12:00 - HERTHA MEYER

Chair: Bernardo Ruegger Almeida Neves (UFMG);

10:20 - GMS1.1*

Synchrotron infrared ultra-microscopy and nanospectroscopy for the study of interdisciplinary materials

Raul O. Freitas¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

10:40 - GMS1.2

Continuous Evaluation of Lignin Removal from Sugarcane Bagasse Cell Wall to Understand Biomass Recalcitrance

Lidiane Oliveira Pinto¹, Juliana da Silva Bernardes², Camila Alves de Rezende¹; ¹Universidade Estadual de Campinas, ²Centro Nacional de Pesquisa em Energia e Materiais

10:55 - GMS1.3

Atomic Force Microscopy Applied to Large-Scale Characterization of 2D Material Flakes: Automation, Shape Parameters and Standardization

Bernardo Ruegger Almeida Neves¹; ¹Universidade Federal de Minas Gerais

11:10 - GMS1.4

Atomic Force Microscopy and Raman Spectroscopy as Tools to Understand Placental Zika Virus Infection

Aldilane Lays Xavier Marques¹, Elaine Cristina Oliveira da Silva¹, Laís Farias Azevedo de Magalhães Oliveira¹, Jennifer Nathieli da Silva Rotandaro de Oliveira¹, Keyla Silva Nobre Pires¹, Eloiza Lopes de Lira Tanabe¹, Samuel Teixeira Souza¹, Eduardo Jorge da Silva Fonseca¹, Alexandre Urban Borbely¹; ¹Universidade Federal de Alagoas

11:25 - GMS1.5

Experimental Parameters to Study Cell Mechanical Properties Using Atomic Force Microscopy

Cleyton Alexandre Biffe¹, Arthur H. Rocha², Ed Carlos Santos e Silva², José S. L. Patané², Carlos

Alberto Rodrigues Costa¹, José E. Krieger², Ayumi Aurea Miyakawa²; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Instituto do Coração

11:40 - GMS1.6

In situ Analysis of *S. mutans* Biofilm Adherence to Substrate Using Atomic Force Microscopy

Maria Clara Müller de Andrade¹, Cleyton Alexandre Biffe², Carlos Alberto Rodrigues Costa², André Galembeck¹; ¹Universidade Federal de Pernambuco, ²Centro Nacional de Pesquisa em Energia e Materiais

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.GMS1.1 - Investigating tribological behavior of deformed UHMWPE using friction force microscopy

Gabriel Branco Pinheiro¹, Clara Muniz Almeida¹; ¹Instituto Nacional de Metrologia, Qualidade e Tecnologia

PS-I.GMS1.2 - The Inflammatory Status of Patients with Sudden-Onset Sensorineural Hearing Loss

Jônatas Bussador do Amaral¹, Kelly Abdo Peron¹, Flávia Tatiana P. Hortense¹, Luiz Henrique da Silva Nali², André Luis Lacerda Bachi², Carolina Nunes França², Beatriz Fumelli Monti Ribeiro³, Glaucia M Machado-Santelli³, Norma de oliveira Penido¹; ¹Universidade Federal de São Paulo, ²Universidade de Santo Amaro, ³Universidade de São Paulo

GMS2 - Electron microscopy, spectroscopy and simulation of nanostructures and engineering materials

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION GMS2

15:20 - 17:00 - GERTRUDE REMPFER

Chairs: Karla Balzuweit (UFMG); Paola Ferreira Barbosa (UNB);

15:20 - GMS2.1*

Multiscale Advanced Electron Microscopy Techniques for Validation of Modelling Efforts Across the Length Scales in Structural Materials

Julio Spadotto^{1,2}, Tom Flint^{1,2}, Jack Donoughue^{1,2}, Albert Smith^{3,2}, Edward Horton⁴, David Knowles^{4,2}, Mahmoud Mostafavi⁴, Ed Pickering^{1,2}, Brian Connolly^{1,2}; ¹University of Manchester, ²Henry Royce Institute for Advanced Materials, Manchester, UK, ³TESCAN-UK, ⁴University of Bristol

15:50 - GMS2.2

Precipitation Hardening in 13Ni (400) Maraging Steels Varying Composition and Aging Time

Daniela Passarelo Moura da Fonseca¹, Maria Virginia Pires Altoé², Angelo Fernando Padilha³; ¹Instituto SENAI de Inovação em Sistemas de Manufatura e Processamento a Laser, ²Lawrence Berkeley National Laboratory, ³Universidade de São Paulo

16:05 - GMS2.3

Intergranular precipitation of the δ phase in deformed Inconel 718 during the OAIC phenomenon temperature range

Amanda Varela¹, Leonardo Sales Araujo¹, Jean Dille², Thaissa Zangerolam L. Rodrigues¹, Flavia da Cruz Gallo³, Luiz Henrique de Almeida¹; ¹Universidade Federal do Rio de Janeiro, ²Université Libre de Bruxelles, ³University of Florida

16:20 - GMS2.4

Background Optimization Procedures for high and low-energy Electron Diffraction Intensities for Performing nanoscale Structural Analysis using electron-Pair Distribution Function (e-PDF) Technique

Naga Vishnu Vardhan Mogili¹, Jefferson Bettini¹, Edson Roberto Leite¹, João Batista Souza Junior¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

16:35 - GMS2.5

Correlating The TEM Size Distribution With ZFC-FC Data To Determine The Blocking Temperature Of A Superparamagnetic Mn-Zn Ferrite

Matheus Torquato¹, Carolina Lopes da Paz¹, Magno de Assis Verly Heringer², Emilson Ribeiro Viana³, Eliel Gomes da Silva Neto⁴, Ronaldo Sergio de Biasi¹; ¹Instituto Militar de Engenharia, ²Centro Brasileiro de Pesquisas Físicas, ³Universidade Tecnológica Federal do Paraná, ⁴Universidade Federal da Bahia

16:50 - GMS2.6

Nanoscale Crystallographic Orientation Mapping of Advanced Metallic Alloys at LCE/UFSCar

Conrado Ramos Moreira Afonso¹, Francisco Gil Coury^{2,1,3}, Guilherme Zepon², Walter José Botta Filho², Diego Davi Coimbra²; ¹Universidade Federal de São Carlos - Campus São Carlos, ²Univerdade Federal de São Carlos, ³Programa de pós-graduação em Ciência e Engenharia de Materiais

POSTER PRESENTATIONS

THURSDAY , NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.GMS2.1 - Antiproliferative and ultrastructural analysis triggered by drugs and compounds from the MMV Covid-Box against Toxoplasma gondii tachyzoites

Andréia Luiza Oliveira Costa¹, Mike dos Santos¹, Rosálida Estevam Nazar Lopes², Rossiane Claudia Vommaro³, Erica dos Santos Martins Duarte⁴; ¹Universidade Federal de Minas Gerais, ²Universidade Federal Minas de Gerais, ³Universidade Federal do Rio de Janeiro, ⁴Universidade Federal Minas Gerais

PS-II.GMS2.2 - Perovskite Nanocrystals Film Deposition For Photovoltaic Applications

Calink Indiara do Livramento dos Santos¹, Maria Zilda Oliveira², Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-II.GMS2.3 - From silver nanoparticle to thin films produced by Pulsed Laser Deposition: effects of Ar gas pressure and substrate surface free energy

Cauê de Souza Coutinho Nogueira¹, Ângela Carolyny Agra Pinto¹, Dante Ferreira Franceschini Filho¹, Yutao Xing¹; ¹Universidade Federal Fluminense

PS-II.GMS2.4 - Evaluation of *Stenotrophomonas maltophilia* biofilm isolated from patients during the COVID-19 pandemic by Scanning Electron Microscopy

Claudiane Santos Maximiano da Silva¹; ¹Universidade do Grande Rio Professor José de Souza Herdy

PS-II.GMS2.6 - Advancing SEM Image Optimization Techniques: An Experimental Review

Elcio Liberato Pires¹, Fabiano Emmanuel Montoro¹, João Marcos da Silva¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-II.GMS2.7 - *In vitro* Evaluation of Biomaterials Based on PCL and Amazonian Oils for Wound Dressing Application

Emily Negrao Paula¹, Daniela Carolina Almeida dos Santos¹, Elcio Malcher Dias Junior², Viktor Oswaldo Cardenas Concha³, Caio Augusto de Almeida Canelas², Marcele Fonseca Passos², Ana Paula Drummond Rodrigues¹; ¹INSTITUTO EVANDRO CHAGAS, ²Universidade Federal do Pará, ³Universidade Federal de São Paulo

PS-II.GMS2.8 - Hierarchical growth of nanoribbons and spherulites of Titanium dioxide as thin films

Hanna Nóbrega Almeida^{1,2}, Felipe Leon Nascimento de Sousa², Giovanna Machado^{1,2}; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste

PS-II.GMS2.9 - Synthesis and Characterization of Fungal Carbon Dots

Regina Maria Geris Dos Santos¹, Marcos Malta Dos Santos¹, Antonio Ferreira Silva¹, Isabel Cristina Rigoli¹, Miguel Soares¹; ¹Universidade Federal da Bahia

PS-II.GMS2.10 - Design and Microscopy of Nanocomposites NP@ZIF-8

Júlia Fernanda da Costa Araújo¹, José Yago Rodrigues Silva¹, Severino Alves Júnior¹; ¹Universidade Federal de Pernambuco

PS-II.GMS2.11 - Spinel Ferrites as Photoanodes for Hydrogen Production Via PEC Systems

Lizeth Carolina Mojica Sánchez¹, Denilson V. Freitas¹, Felipe Leon Nascimento de Sousa¹, Luana Beatriz Correia de Oliveira², Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-II.GMS2.12 - Identification of differences in hair ultrastructure as an auxiliary tool for the conservation of local sheep breeds

Luis Alberto Linhares Rufino¹, Eliandra Maria Bianchini Oliveira², Leonardo Alves Rodrigues Cabral¹, Pedro Vitor de França Vieira³; ¹Universidade Estadual do Ceará, ²Instituto Federal Goiano, ³Universidade Federal do Ceará

PS-II.GMS2.13 - Synthesis and Characterization of Mycelium-Based Composite

Marcos Malta Dos Santos¹, Sabrina Souza Calil¹, Regina Maria Geris Dos Santos¹, Antonio Ferreira Silva¹; ¹Universidade Federal da Bahia

PS-II.GMS2.14 - Influence Of Dip-Coating Times On CsPbBr₃ Film Properties and Solar Cells Performance

Maria Zilda Oliveira¹, Calink Indiara do Livramento dos Santos², Anderson Thesing³, Giovanna

Machado^{1,2}; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste, ³Universidade Federal do Rio Grande do Sul

PS-II.GMS2.15 - Monitoring of L-aspartic acid on calcium carbonate structuration in nanoscale revealed by Cryo-TEM

Noemi Raquel Checca Huaman¹, Alexandre Malta Rossi¹, Andre Linhares Rossi¹; ¹Centro Brasileiro de Pesquisas Físicas

PS-II.GMS2.16 - Enhancing Energy Storage Capacity of Supercapacitors: Exploration of Cobalt-Doped Manganese Oxide Nanowires

Samuel da Silva Eduardo¹, Patrick Benedito Silva de Figueiredo¹, Roberto Batista de Lima¹, Marco Aurélio Suller Garcia¹; ¹Universidade Federal do Maranhão

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.GMS2.69 - Study of Microstructure of Cyclic Oxidation Behavior of the TBC Coating on Ti-6Al-4V Alloy for Aerospace Applications

Renata Jesuína Takahashi¹, Maisa Iakovacz Lagemann¹, Renato Baldan², Adriano Gonçalves dos Reis², Danieli Aparecida Pereira Reis¹; ¹Universidade Federal de São Paulo, ²Universidade Estadual Paulista

GMS3 - Computational microscopy advances and perspectives

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION GMS3

10:20 - 12:00 - JUNE ALMEIDA

Chairs: Rodrigo Portugal (CNPEN); Sidnei Paciornik (PUC-RIO);

10:20 - GMS3.1*

Cryogenic Electron Microscopy is changing the Laws of Physics

Marin van Heel¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

10:45 - GMS3.2

Polarization pattern at the atomic scale in ferroelectric BaTiO₃ under different boundary conditions by HRSTEM

Beatriz Rodrigues Canabarro^{1,2}, Teresa Hungria^{3,4}, Ibukun Olaniyan⁵, Dong Jik Kim⁵, Sebastian Schmitt⁵, César Magen⁶, Catherine Dubourdieu^{5,7}, Nikolay Cherkashin², Sylvie Schamm - Chardon²; ¹Universidade Federal do Rio de Janeiro, ²Centre d'Élaboration de Matériaux et d'Etudes Structurales, ³Université de Toulouse, ⁴Centre Raimond Castaing, ⁵Helmholtz-Zentrum Berlin, ⁶Universidad de Zaragoza, ⁷Freie Universität Berlin

11:00 - GMS3.4

Instance Segmentation for Identification of Hematite Types in Circularly Polarized Light Images of Pellet Feed.

Thalita Dias Pinheiro Caldas¹, Karen Soares Augusto¹, Julio Cesar Alvarez Iglesias², Sidnei Paciornik¹, Alei Leite de Alcantara Domingues³; ¹Pontifícia Universidade Católica do Rio de Janeiro, ²Delloite, ³Vale

11:15 - GMS3.5

Application Of Deep Learning Methods For Sporomorph Subgroup Identification

Richard Bryan Magalhães Santos¹, Karen Soares Augusto¹, Marcos Henrique de Pinho Mauricio¹, Sidnei Paciornik¹, Leandra Costa Lages², Sizenando Bispo-Silva², André Luiz Durante Spigolon², Gil Marcio Avelino Silva², Taíssa Rêgo Menezes³; ¹Pontifícia Universidade Católica do Rio de Janeiro, ²Centro de Pesquisas da PETROBRAS, ³PETROLEO BRASILEIRO SA

11:30 - GMS3.6

Investigating the Permomechanical Properties of Synthetic Coquinas Using X-Ray MicroCT Imaging

Francisco José Rodrigues da Silva Junior¹, Raquel Quadros Velloso¹, Sidnei Paciornik¹, Alexandr Zhemchuzhnikov¹, Marcos Henrique de Pinho Mauricio¹; ¹Pontifícia Universidade Católica do Rio de Janeiro

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.GMS3.1 - Histopathological Analysis of the Kidney in Rats Induced with Polycystic Ovary Syndrome and Treated with Melatonin

Alison Jose da Silva¹, Bruna Ribeiro da Silva Veloso¹, Carolline Guimarães D'assunção², Álvaro Aguiar Coelho Teixeira², Jadyel Sherdelle Guedes do Nascimento¹, João Vitor da Silva¹, Juliana Oliveira Lopes Barbosa¹, Valéria Wanderley Teixeira², Renan Gabriel da Silva Ferreira¹, Ryan Cristian da Silva¹, Sara Vitoria de Oliveira Costa¹, Vitória Samara Santana de Melo¹, Bruno Mendes Tenorio¹, Fernanda das Chagas Angelo Mendes Tenorio¹; ¹Departamento de Histologia e Embriologia, ²Universidade Federal Rural de Pernambuco

PS-III.GMS3.2 - Fractal Analysis of the Spatial Distribution of Cell Nuclei in the Renal Glomeruli of Rats Induced to Polycystic Ovary Syndrome and Treated with Melatonin

Alison Jose da Silva¹, Carolline Guimarães D'assunção², Álvaro Aguiar Coelho Teixeira², Elba Verônica Matoso Maciel de Carvalho¹, Isaque Bertoldo Santos da Silva³, Jadyel Sherdelle Guedes do Nascimento³, Juliana Oliveira Lopes Barbosa^{1,3}, Luciana Maria Silva de Seixas Maia^{1,3}, Ryan Cristian da Silva¹, Valéria Wanderley Teixeira², Bruno Mendes Tenorio³, Fernanda das Chagas Angelo Mendes Tenorio³; ¹Universidade Federal de Pernambuco, ²Universidade Federal Rural de Pernambuco, ³Departamento de Histologia e Embriologia

PS-III.GMS3.3 - The use of Scanning Electron Microscopy for identification of different genera of nematodes of the family Atractidae (Railliet, 1917) Travassos, 1919

Ronald Ferreira Jesus¹, Sara Caroline Gama Oliveira¹, Ana Nunes dos Santos¹, Bianca Nandyara¹, Leandro Maurício Oliveira Silva¹, Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará

PS-III.GMS3.4 - Ultrastructural characterization of two new species of Cosmocercidae Travassos, 1925 parasites of amphibians and Reptiles from Brazil

Ana Nunes dos Santos¹, Luiz Fernando Neres Silva², Thayane Ferreira Fernandes², Ewerton dos

Santos Borges¹, Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará, ²Faculdade Facimp Wyden

PS-III.GMS3.5 - Using Atomic Force Microscopy to Identify Anisotropy Generated in UHMWPE after Plane Strain Compression

Lucas Gimenis de Moura¹, Clara Muniz Almeida¹, Marcia Marie Maru de Moraes¹, Carlos Rodrigo Melo Roesler^{2,3}; ¹Instituto Nacional de Metrologia, Qualidade e Tecnologia, ²Universidade Federal de Santa Catarina, ³Laboratório de Engenharia Biomecânica

PS-III.GMS3.6 - Histopathological Analysis of the Placentas of Human Fetuses with Growth Restriction

Jadyel Sherdelle Guedes do Nascimento¹, Sara Vitoria de Oliveira Costa¹, Elba Verônica Matoso Maciel de Carvalho¹, Luciana Maria Silva de Seixas Maia¹, Ryan Cristian da Silva¹, João Vitor da Silva¹, Isaque Bertoldo Santos da Silva¹, Vitória Samara Santana de Melo¹, Bruna Ribeiro da Silva Veloso¹, Danyella Santana da Costa¹, Débora Farias Batista Leite¹, Bruno Mendes Tenorio¹, Fernanda das Chagas Angelo Mendes Tenorio¹; ¹Universidade Federal de Pernambuco

PS-III.GMS3.7 - Multifractal Analysis of the Spatial Distribution of Cellular Nuclei in Human Lung Carcinoma

Juliana Oliveira Lopes Barbosa¹, Alison Jose da Silva¹, Vitória Samara Santana de Melo¹, Isaque Bertoldo Santos da Silva², Ryan Cristian da Silva¹, Renan Gabriel da Silva Ferreira¹, Bruna Ribeiro da Silva Veloso¹, Luciana Maria Silva de Seixas Maia¹, Elba Verônica Matoso Maciel de Carvalho¹, Bruno Mendes Tenorio¹, Fernanda das Chagas Angelo Mendes Tenorio^{1,2}, Sara Vitória de Oliveira Costa²; ¹Universidade Federal de Pernambuco, ²Departamento de Histologia e Embriologia

PS-III.GMS3.8 - Can Fractal Methods Detect Changes in the Spatial Distribution of Collagen in the Glomerulus After Kidney Injury by Obstruction?

Renan Gabriel da Silva Ferreira¹, Jennyfer Martins de Carvalho², Alison Jose da Silva¹, Juliana Oliveira Lopes Barbosa^{1,3}, Ryan Cristian da Silva¹, João Vitor da Silva¹, Vitória Samara Santana de Melo^{1,3}, Bruna Ribeiro da Silva Veloso³, Sara Vitoria de Oliveira Costa^{1,3}, Jadyel Sherdelle Guedes do Nascimento³, Leucio Duarte Vieira Filho^{1,2}, Bruno Mendes Tenorio^{1,3}; ¹Universidade Federal de Pernambuco, ²Departamento de Fisiologia e Farmacologia, ³Departamento de Histologia e Embriologia

PS-III.GMS3.9 - Automated morphoquantitative analysis of ischemic skin flaps treated with hydrogel of Rhizophora mangle and dimethyl sulfoxide: a fractal analysis

Wesley Ferreira de Moraes Brandão¹; ¹Universidade Federal de Pernambuco

GMS4 - Microscopy and Microanalysis in Industry

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION GMS4

10:20 - 12:00 - HERTHA MEYER

Chairs: Suzana Bottega Peripolli (UERJ); Giovanna Machado (CETENE);

10:20 - GMS4.1*

Scanning Electron Microscopy in Metallurgical Failure Analysis

Annelise Zeemann¹; ¹Materials Life Database Ltda

10:50 - GMS4.2

Understanding the Role of HP Steel Microstructure in its Magnetic Response

Beatriz Rodrigues Canabarro¹, Manoel Jorge Rodrigues Marim¹, Jean Dille², Paula Mendes Jardim¹, Luiz Henrique de Almeida¹, Gabriela Ribeiro Pereira¹; ¹Universidade Federal do Rio de Janeiro, ²Université Libre de Bruxelles

11:10 - GMS4.3

Nucleation and Growth of CaCO₃ Nanoparticles

Raquel Pires Gonçalves¹, Fernanda Costa de Medeiros¹, Andre Linhares Rossi¹, Vanessa Pimentel Lages²; ¹Centro Brasileiro de Pesquisas Físicas, ²Universidade Federal do Rio de Janeiro

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10**SESSION PS-III****17:30 - 18:30 - Exhibition Area****PS-III.GMS4.10 - Characterization of the hydroxyapatite catalyst treated through eggshell, used to convert ethanol into n-butanol.**

Adilson Cláudio Quizunda¹, Suzana Bottega Peripolli¹, José Brant Campos¹, Eustáquio De Souza Baêta Júnior¹, Marilza Samapio², Jaqueline Dias Senra¹, Francisco José Moura³, Camila Alves pelicarto da silva¹; ¹Universidade do Estado do Rio de Janeiro, ²Universidade Estácio de Sá, ³Pontifícia Universidade Católica do Rio de Janeiro

PS-III.GMS4.11 - Wettability of manganese oxide nanostructures prepared by pulsed laser deposition

Ana Carolina Porto Ferreira¹, Yutao Xing¹, Y. S. Pereira¹; ¹Universidade Federal Fluminense

PS-III.GMS4.12 - CNT/Al flakes functionalized with H₂O₂ as nanostructure flux for arc welding.

Cristhian Ricardo Loayza Loayza¹, Matheus dos Santos Barbosa¹, Ademir Angelo Castro Filho¹, Rute Nara de Jesus Farias da Silva¹, Tércio do Santos Cabral¹, Marcos Allan Leite dos Reis¹, Eduardo de Magalhães Braga¹; ¹Universidade Federal do Pará

PS-III.GMS4.13 - Morphological Characterization of the Freshwater Microalgae *Tetradismus obliquus* BR003

Cristiane do Carmo Cesário¹, Jamile Fernanda Silva Cossolin¹, Karla Veloso Gonçalves Ribeiro¹, Jose Eduardo Serrão¹, Jane Sélia dos Reis Coimbra¹; ¹Fundação Universidade Federal de Viçosa

PS-III.GMS4.14 - Study of manufacturing methodology to obtain LPBF processing parameters

Daniela Passarelo Moura da Fonseca¹, Gustavo Scheid Prass¹, Marcos Vinícius Bento¹, Victor Lira Chastinet¹, Henrique Rodrigues Oliveira¹; ¹Instituto SENAI de Inovação em Sistemas de Manufatura e Processamento a Laser

PS-III.GMS4.15 - Testicular Histology and Sperm Morphology of *Horiola picta* (Coquebert, 1801) (Membracidae: Smiliinae: Trogopini)

Dayvson Ayala Costa¹, Paulo Henrique Rezende¹, Mauricio da Silva Paulo¹, Ana Clara Pereira Teixeira¹, Francisco Witallo Sousa do Nascimento¹, Rodrigo Almeida Pinheiro¹, Eraldo Lima¹, Glenda Dias¹, José Lino-Neto¹; ¹Fundação Universidade Federal de Viçosa

PS-III.GMS4.16 - Formation of the Cardiac Skeleton During Embryonic Development *Podocnemis unifilis* (Testudines: Podocnemidae)

Layla Rocha¹; ¹Universidade Federal Rural do Semi-Árido

PS-III.GMS4.17 - The Characterization Of Nanostructured Lipid Carriers (NLCs) Containing Jaboticaba Extract And Caffeine

Leonardo Froes de Azevedo Chang^{1,2}, Isadora Florêncio de Souza¹, Marina Arantes Radicchi¹, Eliana Fortes Gris¹, Victor Carlos Mello¹, Sônia Nair Bão¹; ¹Universidade de Brasília, ²Cooil Cosmetics

PS-III.GMS4.18 - Anatomy and Histology of the Male Reproductive System and Sperm Morphology of *Leptoglossus zonatus* (Dallas, 1852) (Heteroptera: Coreidae)

Mauricio da Silva Paulo¹, Paulo Henrique Rezende¹, Dayvson Ayala Costa¹, Francisco Witallo Sousa do Nascimento¹, Ana Clara Pereira Teixeira¹, Glenda Dias¹, José Lino-Neto¹; ¹Fundação Universidade Federal de Viçosa

PS-III.GMS4.19 - Morphology of the male reproductive system and sperm dimorphism in *Edessa rufomarginata* (De Geer, 1773) (Hemiptera - Pentatomidae)

Mauricio da Silva Paulo¹, Paulo Henrique Rezende¹, Dayvson Ayala Costa¹, Francisco Witallo Sousa do Nascimento¹, Ana Clara Pereira Teixeira¹, Glenda Dias¹, José Lino-Neto¹; ¹Fundação Universidade Federal de Viçosa

PS-III.GMS4.20 - Evaluation of *Pseudomonas aeruginosa* biofilm isolated from a hospital in Rio de Janeiro by Scanning Electron Microscopy

Paula Araujo de Souza¹, Milena Cristina Silva dos Santos¹, Claudiane Santos Maximiano da Silva¹, Rebeca Vitoria da Silva Lage de Miranda¹, Luciana Veloso da Costa¹, Victor do Valle Pereira Midlej¹, Maria Helena Simões Villas Bôas¹, Marcelo Luiz Lima Brandão¹; ¹Fundação Oswaldo Cruz

PS-III.GMS4.22 - Characterization of a Low-Carbon, Solution-Hardened Austenitic Heat Resistant HP Stainless Steel

Rebecca Mederos da Silveira¹, Mario Luiz Cruz Nascimento¹, Rafaella M Ribeiro¹, Aline Raquel Vieira Nunes¹, Luiz Henrique de Almeida¹; ¹Universidade Federal do Rio de Janeiro

PS-III.GMS4.23 - APPLICATION OF ATOMIC FORCE MICROSCOPY IN THE DESIGN OF SOLID PHARMACEUTICAL FORMS OF EFAVIRENZ

Wellington Silva Ferreira¹, Lucas Braga Coelho¹, Beatriz Ferreira de Carvalho Patricio², Paulo Mascarello Bisch¹, Gilberto Weissmuller¹; ¹Universidade Federal do Rio de Janeiro, ²Universidade Federal do Estado do Rio de Janeiro

GMS5 - Nano-bio Interface

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION GMS5

15:20 - 17:00 - GERTRUDE REMPFER

Chairs: Andre Linhares Rossi (CBPF); Marcos Farina (UFRJ);

15:20 - GMS5.1*

Biom mineralization Process of Coralline Algae: From the Early Steps to Climate Change and Pollution Threats

Rodrigo Tomazetto de Carvalho¹; ¹Instituto de Pesquisas Jardim Botânico do Rio de Janeiro

15:40 - GMS5.2

Calcite Spicules Biom mineralization in Calcareous Sponges

Camila Hubner Costabile Wendt¹, Fernanda Costa de Medeiros², Raquel Pires Gonçalves², Marcos Farina¹, Fabio Nudelman³, Michelle Klautau¹, Andre Linhares Rossi²; ¹Universidade Federal do Rio de Janeiro, ²Centro Brasileiro de Pesquisas Físicas, ³The University of Edinburgh

15:50 - GMS5.3

Cryoand In-Situ TEM of Calcium Phosphate Crystallization In Aqueous Media

Gisele Maria Leite Dalmonico¹, Marcos Farina², Andre Linhares Rossi³; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Universidade Federal do Rio de Janeiro, ³Centro Brasileiro de Pesquisas Físicas

16:00 - GMS5.4

Analyses of the precursor phases of CaCO₃ nanoparticles by Cryo-TEM

Fernanda Costa de Medeiros¹, Raquel Pires Gonçalves¹, Vanessa Pimentel Lages², Andre Linhares Rossi¹; ¹Centro Brasileiro de Pesquisas Físicas, ²Universidade Federal do Rio de Janeiro

16:10 - GMS5.5

Effects of graphene oxide-based materials on tumor and non-tumor cell lines

Beatriz Fumelli Monti Ribeiro¹, Marcelo Medina de Souza², Julyane Batista Chaves¹, Guilherme Luiz Souza de Jesus¹, Devaney Ribeiro do Carmo³, Glaucia M Machado-Santelli¹; ¹Universidade de São

Paulo, ²Centre of Excellence in New Target Discovery (CENTD), Butantan Institute, ³Universidade Estadual Paulista

16:20 - GMS5.6

Nanostructured Lipid Carriers (NLCs) And Natural Deep Eutectic Solvents (NaDES): How Natural Resources Can Revolutionize Chemistry

Luísa Schuh Vargas^{1,2,3}, Sônia Nair Bão¹, Marina Arantes Radicchi¹, Victor Carlos Mello^{1,2,3}; ¹Universidade de Brasília, ²NanoCycle Group, ³Cooil Cosmetics

16:30 - GMS5.7

Synthesis of Phosphatidylcholine and Cholesterol Liposomes for Carriage of Ilex guayusa Antioxidant Extract.

Flavio Cunha Monteiro¹, Marco Cesar Cunegundes Guimarães¹; ¹Universidade Federal do Espírito Santo

16:40 - GMS5.8

Exfoliated Collagen as a Building Block of Hydrogels for Tissue Engineering

Niédja Fittipaldi Vasconcelos¹, Priscilla Stela Santana de Oliveira¹, Almerinda Agrelli¹, Rayane Cristine Santos da Silva¹, Isabel Renata de Souza Arruda¹, Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.GMS5.3 - Ag Doping Ti Alloys: Formation and Antibacterial Effect of the TiO₂ Nanotubes

Marcia de Oliveira Taipina¹, Rubens Caram¹, Alessandra Cremasco¹; ¹Universidade Estadual de Campinas

FRIDAY , NOVEMBER 10**SESSION PS-III****17:30 - 18:30 - Exhibition Area****PS-III.GMS5.24 - Development of a Low-Cost Adsorbent Using Moringa oleifera Seeds**

Adriano Gonçalves dos Reis¹, Lucas Juvelho Gargel¹, Cely Roledo¹, Danieli Aparecida Pereira Reis²; ¹Universidade Estadual Paulista, ²Universidade Federal de São Paulo

PS-III.GMS5.25 - Nanotubular Matrix Of TiO₂ Functionalized With Peptides For Application In Dental Implants

Almerinda Agreli¹, Isabel Renata de Souza Arruda¹, Niédja Fittipaldi Vasconcelos¹, Priscilla Stela Santana de Oliveira¹, Rayane Cristine Santos da Silva¹, Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-III.GMS5.26 - Analysis of Structure of Small Molecule Surfactant and Molecule-Water Interfaces by Cryo-TEM

Gisele Maria Leite Dalmonico¹, Murillo Henrique de Matos Rodrigues¹, Laura Caetano Escobar da Silva², Edson Roberto Leite¹, Cleyton Alexandre Biffe¹; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Universidade Estadual de Campinas

PS-III.GMS5.27 - Morphological Analysis By Transmission And Scanning Electron Microscopy Of B16-F10 Murine Melanoma Cells Treated With AluminumPhthalocyanine Chloride

Dafne Caroline Marques¹, Sônia Nair Bão¹, Victor Carlos Mello¹; ¹Universidade de Brasília

PS-III.GMS5.28 - Bioactive Polymeric Coatings with PMMA and Silver Nanoparticles on Ti alloys for Implantable Medical Devices

Luzia Rejane Lisbôa Santos¹, Audrey Nunes de Andrade¹, Rayane Cristine Santos da Silva¹, Isabel Renata de Souza Arruda¹, Magno F.H.B.I. Teixeira¹, Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-III.GMS5.29 - Optimizing Magnetic Nanoparticle Synthesis for High-Capacity Protein Immobilization through Electrostatic Interactions

Marco Cesar Cunegundes Guimarães¹; ¹Brazilian Society of Microscopy and Microanalysis

PS-III.GMS5.30 - Advanced Element Mappings Of Biological Samples

Max Patzschke¹; ¹Bruker

PS-III.GMS5.31 - Type 1 Collagen Structured with Cellulose Nanocrystals

Priscilla Stela Santana de Oliveira¹, Almerinda Agreli¹, Isabel Renata de Souza Arruda¹, Niédja Fittipaldi Vasconcelos¹, Rayane Cristine Santos da Silva¹, Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-III.GMS5.32 - Functionalization of Titanium Metallic Surfaces with Hydroxyapatite and Collagen for Application in Dental Implants

Rayane Cristine Santos da Silva¹, Almerinda Agrelli¹, Isabel Renata de Souza Arruda¹, Niédja Fittipaldi Vasconcelos¹, Priscilla Stela Santana de Oliveira¹, Thiago André Salgueiro Soares¹, Giovanna Machado¹; ¹Centro de tecnologias estratégicas do Nordeste

PS-III.GMS5.33 - Applications of the scanning electron microscopy (SEM) in dentistry.

Rocio Orellana Fernandez¹; ¹Universidad de Chile

PS-III.GMS5.34 - Application of scanning electron microscopy in the dental area dentistry

Rocio Orellana Fernandez¹, Cristian Covarrubias Gallardo¹; ¹Universidad de Chile

LSS1 - Educational and capacity building in microscopy

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION LSS1

10:20 - 12:00 - RITA LEVI-MONTALCINI

Chair: Adán Guerrero (UNAM);

10:20 - LSS1.1*

Global BioImaging : empowering Imaging Scientists trough Training

Yara Reis¹; ¹Global BioImaging

10:45 - LSS1.2*

Train-the-Trainer to Accelerate Science

Claire Brown¹; ¹McGill University

11:10 - LSS1.3*

Professional Graduate Program in Bioimaging: a new frontier for the education of imaging scientists in Latin America.

Silvana Allodi¹; ¹Universidade Federal do Rio de Janeiro

11:35 - LSS1.4*

Napari-LATAM a workshop for napary-Python education

Julian Mejila¹; ¹Universidad Nacional Autónoma de México

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.LSS1.4 - Network of Technological Platforms – A Sustainable Tool for Microscopy

Camila Rodrigues de Carvalho¹, Roney Santos Coimbra¹, Kelly Alves Bicalho Carvalho¹, Carlos Eduardo Calzavara Silva¹, Rafaella Antunes Moreira¹, Simara Semíramis de Araújo¹, Cassia Dias Pereira², Wim Maurits Sylvain Degrave², Rodrigo Corrêa Oliveira²; ¹Instituto Rene Rachou/Fiocruz Minas, ²Fundação Oswaldo Cruz

PS-I.LSS1.5 - Viagem Microscópica project and electron microscopy as subject for science outreach in social networks based on short videos.

Rayane Gonçalves Pereira da Silva¹, Vitoria Maria de Brito¹, Beatriz de Oliveira Martha¹, Joice Ferreira da Silva¹, Lucio Ayres Caldas¹, Marcel Menezes Lyra da Cunha¹; ¹Universidade Federal do Rio de Janeiro

PS-I.LSS1.6 - The Use Of Optical Microscopes In Biology Teaching

Thaiza Ferreira Menegassi de Souza¹, Renan Ferreira Menegassi de Souza²; ¹Faculdade das Américas, ²Universidade Federal do ABC

THURSDAY, NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.LSS1.71 - MICROVERSE: Is the Sistine Chapel a Diatom? Poetics and Universe of Electron Microscopy

Cecilia Vilca¹, Gladys Ocharan^{2,1}, José Vilca¹; ¹Microscopía Electrónica y Aplicaciones en el Perú, ²Universidad Nacional de San Agustín de Arequipa

LSS10 - Microscopy imaging of pathogens, host and their interactions II

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION LSS10

15:20 - 17:00 - RITA LEVI-MONTALCINI

Chair: Carolina de Lima Alcantara (UFRJ);

15:20 - LSS10.1*

Current approaches to the analysis of the structure of cell components of Parasitic Protozoa

Wanderley de Souza^{1,2,3}; ¹Universidade do Estado do Amazonas, ²Universidade Federal do Rio de Janeiro, ³Centro Nacional de Biologia Estrutural e Bioimagem

15:55 - LSS10.2

Characterization Morphology of Helminths from Amazon Sailfin Catfish *Pterygoplichthys pardalis* (Castelnau, 1855)

Makoto Enoki Caracciolo¹, Daniel Brito Porto², Fabrício Barros de Sousa², Jéssica Araújo Marques¹, Maria Paula Mourão¹, José Celso de Oliveira Malta², Wanderley de Souza¹; ¹Universidade do Estado do Amazonas, ²Instituto Nacional de Pesquisas da Amazônia

16:10 - LSS10.3

Mapping Of *Trichuris muris* Attachment Process On The Host Intestine Using Field Emission SEM.

Brunna Vianna Braga¹, Eduardo José Lopes-Torres^{1,2}; ¹Universidade do Estado do Rio de Janeiro, ²Sociedade Brasileira de Microscopia e Microanálise

16:25 - LSS10.4

Characterization of *Giardia intestinalis* cytoskeleton: A new extra-axonemal structure evidenced by high-resolution microscopy techniques

Raphael Verdan Curti¹, Marlene Benchimol^{1,2}, Kildare Miranda¹, Ana Paula Rocha Gadelha³; ¹Universidade Federal do Rio de Janeiro, ²Unigranrio- Programa de Pós-graduação em Biomedicina Translacional, ³Instituto Nacional de Metrologia, Qualidade e Tecnologia

16:40 - LSS10.5

New Insights into the ultrastructure of the undulating membrane and parabasal filaments of *Trichomonas vaginalis*

Abigail Miranda-Magalhães¹, Antonio Pereira-Neves¹; ¹Instituto Aggeu Magalhães

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.LSS10.35 - Ultrastructural characterization of *Schrankiana inconspicata* (Nematoda: Atractidae) parasite of *Leptodactylus pentadactylus* (Anura: Leptodactylidae) from the Brazilian Amazon

Adriano José Silva Félix¹, Jorge Kevin da Silva Neves¹, Gabriel Lima Rebêlo¹, Luiz Felipe Ferreira Trindade¹, Carlos Eduardo Costa-Campos², Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará, ²Universidade Federal do Amapá

PS-III.LSS10.36 - Characterization of *Metarhabditis blumi* a new metazoan used as an experimental model

Ander Castello Branco Santos¹, Julia Rodrigues Genuncio¹, Dayane Alvarinho de Oliveira¹, Eduardo José Lopes-Torres^{1,2}; ¹Universidade do Estado do Rio de Janeiro, ²Sociedade Brasileira de Microscopia e Microanálise

PS-III.LSS10.37 - Ultrastructural Analysis of the Effect of Topoisomerase Inhibitors on *Giardia intestinalis*

Ana Paula Rocha Gadelha¹, Marlene Benchimol², Antonia Dalilla de Oliveira Brito³; ¹Instituto Nacional de Metrologia, Qualidade e Tecnologia, ²Universidade Federal do Rio de Janeiro, ³Unigranrio- Programa de Pós-graduação em Biomedicina Translacional

PS-III.LSS10.38 - Diaryl Ditelluride Increases the Number of Lipid Bodies in *Leishmania (Leishmania) infantum*

Rian Richard¹, Francielle Pelegrin Garcia, Danielle Lazarin Bidoia¹, Tânia Ueda Nakamura¹, Sueli de Oliveira Silva¹, Leandro Piovan², Celso Vataru Nakamura¹; ¹Universidade Estadual de Maringá, ²Universidade Federal do Paraná

PS-III.LSS10.39 - Ultrastructural characterization of *Labiduris* sp. (Nematoda: Atractidae) Parasite of *Chelonoidis denticulatus* (Testudines: Testudinidae) from the Brazilian Amazon

Sara Caroline Gama de Oliveira¹, Ronald Ferreira Jesus¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará

PS-III.LSS10.40 - Study of the Interaction of the Protozoan *Trypanosoma cruzi* with Endoplasmic Reticulum of Cardiomyoblasts: A Pharmacological and Ultrastructural Approach

Gleicyane Silva Gomes¹, Lucas Eduardo Bezerra de Lima¹, Maria Letícia Gomes de Almeida², Ronaldo Oliveira Nascimento³, REGINA CELIA BQ de Figueiredo¹; ¹Instituto Aggeu Magalhães - Fiocruz Pernambuco, ²Universidade Federal de Pernambuco, ³Universidade Federal Rural de Pernambuco

PS-III.LSS10.41 - Microchemical Anatomy of Acidocalcisomes in *Plasmodium vivax* sporozoites

Glenda Quaresma Ramos¹, Jander Matos Guimarães¹, Rosa Amélia Gonçalves Santana², Wanderley De souza³, Kildare Miranda³; ¹Universidade do Estado do Amazonas, ²Fundação de Medicina Tropical Doutor Heitor Vieira Dourado, ³Universidade Federal do Rio de Janeiro

PS-III.LSS10.42 - Ultrastructural and molecular characterization of a new filarial worm parasite of *Leptodactylus macrosternum* (Anura: Leptodactylidae) from the Brazilian Amazon

Gabriel Lima Rebêlo¹, Jorge Kevin da Silva Neves¹, Adriano José Silva Félix¹, Luiz Felipe Ferreira Trindade¹, Marcos Roberto Dias-Souza¹, Talita Pantoja Ribeiro¹, Arnaldo Maldonado Júnior², Karina Varella², Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará, ²Fundação Oswaldo Cruz

PS-III.LSS10.43 - Morphological Characterization of *Aplectana* sp. (Nematoda: Cosmocercidae) Parasite of *Osteocephalus helenae* (Anura: Hylidae) from Brazilian Amazon using Light Microscopy

Jorge Kevin da Silva Neves¹, Adriano José Silva Félix¹, Gabriel Lima Rebêlo¹, Talita Pantoja Ribeiro¹, Luiz Felipe Ferreira Trindade¹, Carlos Eduardo Costa-Campos², Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará, ²Universidade Federal do Amapá

PS-III.LSS10.44 - Trypanocidal Activity of a Novel Phthalimide-1,2,3-triazole Hybrid Derivative on *Trypanosoma cruzi*: An Ultrastructural Study

Maria Letícia Gomes de Almeida¹, Lucas Eduardo Bezerra de Lima¹, Gleicyane Silva Gomes¹, Ronaldo Oliveira Nascimento², REGINA CELIA BQ de Figueiredo¹; ¹Instituto Aggeu Magalhães - Fiocruz Pernambuco, ²Universidade Federal Rural de Pernambuco

PS-III.LSS10.45 - Scanning Electron Microscopy as a Tool for Taxonomy of Neotropical Nematodes of The Family Molineidae

Yuri Willkens de Oliveira Costa¹, Deivyson João Malcher da Paixão¹, Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará

PS-III.LSS10.46 - Revisiting *Physaloptera retusa* (Nematoda, Physalopteridae): Combining light and scanning electron microscopies to review long described helminth species

Lilian Cristina Macedo¹, Yuri Willkens de Oliveira Costa², Leandro Maurício Oliveira Silva²,

Francisco Tiago de Vasconcelos Melo², Jeannie Nascimento dos Santos²; ¹Universidade Federal Rural da Amazônia, ²Universidade Federal do Pará

LSS2 - Microscopy research applied to animal cells

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION LSS2

15:20 - 17:00 - GERTRUDE REMPFER

Chairs: Lia Medeiros Kuczera (ICC); Beatriz Santana Borges (CNPEM, CNPEM);

15:20 - LSS2.1*

Multiscale-Multimodal Imaging - New Methods to Bridge Scales

Mark H Ellisman¹; ¹University of California San Diego

15:55 - LSS2.2*

PERINATAL ASPHYXIA INDUCES SHORT- AND LONG-TERM MODIFICATIONS IN THE RAT CENTRAL NERVOUS SYSTEM. EXPERIMENTAL NEUROPROTECTIVE TOOLS

Francisco Capani¹; ¹CAECHIS-UAI-CONICET

16:30 - LSS2.3

Characteristics Of The Radial Glial Cells As Progenitor In The Neurogenic Niches Of *Austrolebias charrua* Brain

Anabel Fernández¹, Juan Carlos Rosillo, Silvia Olivera-Bravo¹, Gabriela Casanova Larrosa²; ¹Instituto de Investigaciones Biológicas Clemente Estable, ²Facultad de Ciencias

16:50 - LSS2.4

SEM And Light Microscopy As Tools To Describe Oocyte Development Of *Hemigrammus ocellifer* (Characiformes: Characidae).

Juan Pablo Caldas Caldas¹, Ivana Kerly da Silva Viana¹, Antonio Elivelton Paiva de Oliveira¹, Alex Sousa Paiva¹, Naomin Gonçalves de Castro¹, Juliana Caroline Dias Pantoja¹, Breno Richard Monteiro Silva¹, Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.LSS2.7 - Morphological and Biometrical Evaluation Of The Ovarian Development Of *Boulengerella cuvieri*

Alecsander Marconi Furtado de Cristo¹, Yuri Wellington Machado Favacho¹, Allex Sousa Paiva¹, Naomin Gonçalves de Castro¹, Geovanna Sousa da Silva Chaves¹, Rossineide Martins da Rocha¹, Ivana Kerly da Silva Viana¹, Yanne Alves Mendes¹; ¹Universidade Federal do Pará

PS-I.LSS2.8 - Evaluation of Immune System Activation Through Methylene Blue Associated with Nanostructures for Breast and Ovarian Cancer

Ana Luísa de Gouvêa da Silva¹, Cleber Lopes Filomeno¹, Leonardo Giordano Paterno¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-I.LSS2.9 - SEM And Optical Microscopy Analyses Of Testicular Development In *Leporinus friderici* Bloch 1794, In The Amazonian Streams

Breno Richard Monteiro Silva¹, Ivana Kerly da Silva Viana¹, Clara Evely Farias Botelho¹, Yanne Alves Mendes¹, Antonio Elivelton Paiva de Oliveira¹, Juan Pablo Caldas Caldas¹, João Marcos Santos Rodrigues¹, Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará

PS-I.LSS2.10 - Morphometry And Characterization Of The Testicular Development Of *Hemigrammus ocellifer* (Characiformes: Characidae) In Eastern Amazon Streams

Antonio Elivelton Paiva de Oliveira¹, Naomin Gonçalves de Castro¹, Breno Richard Monteiro Silva¹, Juan Pablo Caldas Caldas¹, Allex Sousa Paiva¹, Yuri Wellington Machado Favacho¹, Alecsander Marconi Furtado de Cristo¹, Ivana Kerly da Silva Viana¹, Bruno da Silveira Prudente², Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará, ²Universidade Federal Rural da Amazônia

PS-I.LSS2.11 - Morphological Study of the Cutaneous Glands of the Caecilian *Siphonops annulatus* (Amphibia, Gymnophiona), with Emphasis in the Poison Glands

Beatriz Mauricio¹; ¹INSTITUTO BUTANTAN

PS-I.LSS2.12 - TEM protocol optimized for biological models of nanotoxicology

Beatriz Santana Borges¹, Gabriela H. da Silva¹, Francine Côa¹, Aline Maria Zigiotta de Medeiros¹, Diego Stéfani Teodoro Martinez¹, Rodrigo Villares Portugal¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-I.LSS2.13 - Cytotoxic Effects of β -Secosterol on BRL-3A and HTC Rat Liver Cells

Bianca Sayuri Takayasu¹, Janice Onuki², Anali Del Milagro Bernabe Garnique¹, Igor Rodrigues

Martins³, Miriam Uemi³, Glaucia M Machado-Santelli¹; ¹Universidade de São Paulo, ²INSTITUTO BUTANTAN, ³Universidade Federal de São Paulo

PS-I.LSS2.14 - Caffeic Acid-phthalimide Protects L929 Fibroblasts Against UVB-Induced Oxidative Damage

Bruna Terra¹; ¹Universidade Estadual de Maringá

PS-I.LSS2.15 - Disruption of the intestinal epithelium and the identification of bacterial invasion in the acute phase of trichuriasis

Dayane Alvarinho de Oliveira¹, Eduardo José Lopes-Torres^{1,2}; ¹Universidade do Estado do Rio de Janeiro, ²Sociedade Brasileira de Microscopia e Microanálise

PS-I.LSS2.16 - Azadirachtin-based Insecticide Causes Cell Death In The Testis Of The Southern Armyworm Spodoptera eridania (Lepidoptera: Noctuidae)

Elton Luiz Scudeler¹, Daniela Carvalho dos Santos¹; ¹Universidade Estadual Paulista

PS-I.LSS2.17 - Fluorescent Image Processing And Computational Tools In Order To Analyze Morphometric Changes In The Sperm Midpiece

Fernanda Skowronek¹, Santiago Pietroroia¹, Mariana Ford¹, Diego Silvera², Federico Lecumberry², Adriana Cassina¹, Rossana Sapiro¹; ¹Facultad de Medicina UdelaR, ²Facultad de Ingeniería

PS-I.LSS2.18 - MODIFICATIONS IN THE CNS INDUCED BY PERINATAL ASPHYXIA USING A MURINE MODEL

Francisco Capani^{1,2,3}, Juan Pablo Luaces¹, Sofia Bordet¹, Guenson Chevallier¹, Carlos Federico Kusnoer¹, Lucas Udovin¹, Nicolas Toro Urrego¹, Tamara Kobiec^{1,4}, Santiago Perez Lloret⁴, Matilde Otero Losada¹, Rodolfo Kolliker Frers¹; ¹CAECHIS-UAI-CONICET, ²Departamento de Biología, Facultad de Ciencias de la Salud, Universidad Argentina J F Kennedy, ³Licenciatura en Farmacia, Universidad Metropolitana, ⁴Centro de Investigaciones en Psicología y Psicopedagogía (CIPP), Facultad de Psicología y Psicopedagogía, Pontificia Universidad Católica Argentina (UCA), Buenos Aires, Argentina.

PS-I.LSS2.19 - Morphology of the Male Reproductive System and Histology of the Testes of Discodon minutum (Pic, 1928) (Coleoptera: Cantharidae: Silinae)

Francisco Witallo Sousa do Nascimento¹, Mauricio da Silva Paulo¹, Paulo Henrique Rezende¹, Ana Clara Pereira Teixeira¹, Dayvson Ayala Costa¹, Glenda Dias¹, José Lino-Neto¹; ¹Fundação Universidade Federal de Viçosa

PS-I.LSS2.20 - A synthetic modified flavonoid protects striatal myelin in a pharmacological model of glutaric acidemia type I.

Gabriela Casanova Larrosa¹, Juan Carlos Rosillo², Marcie Jimenez¹, Anabel Fernández^{2,3}, Magela Rodao¹, Gaby Martínez¹, Eugenia Isasi¹, Nadia Presa Gau³, Gabriel Otero¹, Mauricio Cabrera¹, Hugo Cerecetto¹, Mercedes González¹, Silvia Olivera Bravo²; ¹Universidad de la República, ²Instituto de Investigaciones Biológicas Clemente Estable, ³Facultad de Ciencias

PS-I.LSS2.21 - Evaluation of adipose tissue browning or whitening by two different doses of omega-3 (DHA) supplementation in mice

Gabriel Ribeiro Farias¹; ¹Universidade de Brasília

PS-I.LSS2.22 - Impacts of Western-Diet-Induced Obesity in Mitochondria and Viability of Bone Marrow Cells in Mice

Genilza Pereira de Oliveira¹, Daniela Caldas de Andrade¹, Ana Lucia Rosa Nascimento¹, Erika Afonso Costa Cortez Marques¹, Simone Nunes de Carvalho¹, Alessandra Alves Thole¹; ¹Universidade do Estado do Rio de Janeiro

PS-I.LSS2.23 - IGF-1 Improves Mitochondrial Bioenergetics in Obese Mice

Daniela Caldas de Andrade¹, Genilza Pereira de Oliveira¹, Ana Lucia Rosa Nascimento¹, Simone Nunes de Carvalho¹, Alessandra Alves Thole¹, Erika Afonso Costa Cortez Marques¹; ¹Universidade do Estado do Rio de Janeiro

PS-I.LSS2.24 - Characterization of Gonadal Maturing In The Initial Life Stage of Crassostrea gasar

Geovanna Sousa da Silva Chaves¹, Juliana Caroline Dias Pantoja¹, Naomin Gonçalves de Castro¹, Juan Pablo Caldas Caldas¹, João Marcos Santos Rodrigues¹, Yuri Wellington Machado Favacho¹, Renata Silva de Oliveira¹, Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará

PS-I.LSS2.25 - Immunomarking Of Extracellular Matrix Proteins During The Gonadal Development Of Males Of Crassostrea Gasar

Geovanna Sousa da Silva Chaves¹, Juliana Caroline Dias Pantoja¹, Naomin Gonçalves de Castro¹, Juan Pablo Caldas Caldas¹, Alecsander Marconi Furtado de Cristo¹, Yuri Wellington Machado Favacho¹, Allex Sousa Paiva¹, Yanne Alves Mendes¹, Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará

PS-I.LSS2.26 - Brain Of Austrolebias charrua Fingerlings: Cellular And Proliferative Characteristics.

Juan Carlos Rosillo^{1,2}, María Laura Herrera¹, Stephanie Silva¹, Inés Berrostequieta¹, Gabriela Casanova Larrosa³, Silvia Olivera-Bravo¹, Anabel Fernández^{1,3}; ¹Instituto de Investigaciones Biológicas Clemente Estable, ²Facultad de Medicina, Universidad de la República, ³Facultad de Ciencias

PS-I.LSS2.27 - Gametogenesis Of Poptella compressa Günther 1864, (Characiformes: Characidae) From Amazon Rivers

Clara Evely Farias Botelho¹, Breno Richard Monteiro Silva¹, Ivana Kerly da Silva Viana¹, Alecsander Marconi Furtado de Cristo¹, Juliana Caroline Dias Pantoja¹, Renata Silva de Oliveira¹, Juan Pablo Caldas Caldas¹, Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará

PS-I.LSS2.28 - The Formation of Autophagosome After Treatment With Photodynamic Therapy in B16F10

Karen Letycia de Paiva¹, Marina Mesquita Simões¹, Isadora Florêncio de Souza¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-I.LSS2.29 - Ultrastructural changes caused by the Zika virus in SIRC cells at different periods of infection

Luana Barbosa de Lima¹, Gislene Mitsue Namiyama¹, Noemi Nosomi Taniwaki¹, Maria Isabel de Oliveira¹; ¹Instituto Adolfo Lutz

PS-I.LSS2.30 - L-arginine supplementation improves muscle healing in rats that suffered skin burns

Juliana Barbosa da Silva¹, Isabel Michely Da Silva Galvão De Melo¹, Alison Jose da Silva¹, Juliana Oliveira Lopes Barbosa¹, Francisco Carlos Amanajás de Aguiar Júnior¹, Luciana Maria Silva de Seixas Maia^{1,2}; ¹Universidade Federal de Pernambuco, ²Departamento de Histologia e Embriologia

PS-I.LSS2.31 - ELECTRON MICROSCOPY OF SARS-CoV-2 MORPHOGENESIS AND EGRESS IN VERO CELLS

Lucio Ayres Caldas¹; ¹Universidade Federal do Rio de Janeiro

PS-I.LSS2.32 - Aragonite Microstructure in the Caudofoveata (mollusca) Spicule: a Challenging Morphological Organization Pattern

Camila Wendt¹, Andre Linhares Rossi², Jefferson Cypriano¹, Cleo D. de Castro Oliveira¹, Corinne Arrouvel³, Jacques Werckmann², Marcos Farina¹; ¹Universidade Federal do Rio de Janeiro, ²Centro Brasileiro de Pesquisas Físicas, ³Universidade Federal de São Carlos - Campus Sorocaba

PS-I.LSS2.33 - Cell proliferation and neurogenesis in juvenile and adult *Brachyhypopomus gauderio*.

Rocío Lion¹, Micaela De Mori¹, María Esmeralda Castelló Gómez¹; ¹Instituto de Investigaciones Biológicas Clemente Estable

PS-I.LSS2.34 - Possible Secretary Role of the Apical Process of “CSF-cNs” in the Spinal Cord of the *Gata3* Transgenic Mice.

Maria Ines Rehermann¹, Magdalena Vitar¹, Omar Trujillo-Cenóz¹, Raul Russo¹, Federico Trigo¹; ¹Instituto de Investigaciones Biológicas Clemente Estable

PS-I.LSS2.35 - Photodynamic Therapy Has The Potential To Induce Immunogenic Cell Death And Morphological Changes In Dendritic Cells

Marina Mesquita Simões¹, Karen Letycia de Paiva¹, Isadora Florêncio de Souza¹, Victor Carlos Mello¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-I.LSS2.36 - Distribution of Proliferation Zones In The Brain Of Larval *Brachyhypopomus gauderio*.

Micaela De Mori Conde¹, Rocío Lion¹, Sofía Ramunday¹, María Esmeralda Castelló Gómez¹; ¹Instituto de Investigaciones Biológicas Clemente Estable

PS-I.LSS2.37 - Characterization of Ovarian and Oocytary Development of *Moenkhausia collettii*

Naomin Gonçalves de Castro¹, Antonio Elivelton Paiva de Oliveira¹, Juan Pablo Caldas Caldas¹,

Breno Richard Monteiro Silva¹, Geovanna Sousa da Silva Chaves¹, Alex Sousa Paiva¹, Ivana Kerly da Silva Viana¹, Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará

PS-I.LSS2.38 - Analysis of The Anatomy and Neurogenesis in the Spinal Cord between Male and Females Of *Austrolebias charrua* Fishes.

Stephanie Silva Jaureguiberry¹, Anabel Fernández^{1,2}, María Laura Herrera¹, Inés Berrostequieta¹, Juan Carlos Rosillo¹; ¹Instituto de Investigaciones Biológicas Clemente Estable, ²Facultad de Ciencias

PS-I.LSS2.39 - Bone Marrow Mesenchymal Stem Cells Differentiated to Schwann-like Phenotype Expresses MBP Myelin Protein in Co-culture in vitro.

Yadira Gasca Martínez¹, Nidia Carrillo González¹, Tania Campos Ordoñez¹, Gabriela Escobar Camberos¹, Gabriela Stefania Reyes Gutiérrez¹, Graciela Gudiño Cabrera¹; ¹Universidad de Guadalajara

PS-I.LSS2.40 - Gonadal Development of *Geophagus proximus* (Cichliformes: Cichlidae)

Luiz Fernando Gomes dos Passos¹, Yanne Alves Mendes¹, Renata Silva de Oliveira¹, Alecsander Marconi Furtado de Cristo¹, Diógenes Henrique de Siqueira Silva², Rosália Furtado Cutrim Souza³; ¹Universidade Federal do Pará, ²Universidade Federal do Sul e Sudeste do Pará, ³Universidade Federal Rural da Amazônia

PS-I.LSS2.41 - Spermatogenesis And Morphometry In Endemic Cichlid *Geophagus argyrostictus* In Pre Dam Period Of Xingu River

Yanne Alves Mendes¹, Omar Said Correa Mounsi¹, Renata Silva de Oliveira¹, Yuri Wellington Machado Favacho¹, Breno Richard Monteiro Silva¹, Alecsander Marconi Furtado de Cristo¹, Antonio Elivelton Paiva de Oliveira¹, Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará

PS-I.LSS2.42 - Immunoreaction To PCNA, Caspase-3, BCL-2 In The Hepatopancreas Of The Amazon Prawn During Gonadal Maturation

Yuri Wellington Machado Favacho¹, Alecsander Marconi Furtado de Cristo¹, Breno Richard Monteiro Silva¹, Gicelle Maria Farias da Silva¹, Geovanna Sousa da Silva Chaves¹, Renata Silva de Oliveira¹, Yanne Alves Mendes¹, Maria Auxiliadora Pantoja Ferreira¹; ¹Universidade Federal do Pará

PS-I.LSS2.43 - Influence of soy protein concentrate on weight gain and intestinal morphology in juvenile pirarucu *Arapaima gigas* Shinz,1822

Renata Silva de Oliveira¹, Yuri Wellington Machado Favacho¹, Naomin Gonçalves de Castro¹, Antonio Elivelton Paiva de Oliveira¹, Juliana Caroline Dias Pantoja¹, Geovanna Sousa da Silva Chaves¹, Luiz Fernando Gomes dos Passos¹, Yanne Alves Mendes¹, Maria Auxiliadora Pantoja Ferreira¹, Roselany de Oliveira Correa², Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará, ²Empresa Brasileira de Pesquisa Agropecuária

LSS3 - 3D Structures from In-cell structural biology to ultrastructure

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION LSS3

15:20 - 17:00 - RITA LEVI-MONTALCINI

Chairs: Ingrid Augusto (UFRJ); Kildare Miranda (UFRJ);

15:20 - LSS3.1*

Imaging macromolecular machines directly inside cells with electron cryotomography

Grant Jensen¹; ¹Brigham Young University

15:45 - LSS3.2*

A Cryo-Electron Tomography Workflow To Study Plasmodesmata In High-Pressure Frozen Moss Tissues

Matthias Pöge¹, Marcel Dickmanns¹, Peng Xu¹, Meijing Li¹, Christoph Kaiser¹, Oda Schiøtz¹, Sven Klumpe¹, Jürgen Plitzko¹, Wolfgang Baumeister¹; ¹Max Planck Institute of Biochemistry

16:10 - LSS3.3

Investigation of the Osmoregulatory System of Trypanosoma cruzi in the Light of Contemporary Structural Cell Biology

Ingrid Augusto¹, Rodrigo Villares Portugal², Wanderley de Souza^{3,1}, Kildare Miranda¹; ¹Universidade Federal do Rio de Janeiro, ²Centro Nacional de Pesquisa em Energia e Materiais, ³Universidade do Estado do Amazonas

16:23 - LSS3.4

Preliminary Three-dimensional and Morphometric Analysis of Cyrilia lignieresi Macrogamont Organelles

Maira Catherine Pereira Turiel¹, Brenda Santarém Fachetti¹, Camila Hubner Costabile Wendt², Edilene Oliveira da Silva³, Ana Paula Drummond Rodrigues⁴, Wanderley De souza², Kildare Miranda², José Antonio Picanço Diniz Junior⁴; ¹Universidade do Estado do Pará, ²Universidade Federal do Rio de Janeiro, ³Universidade Federal do Pará, ⁴INSTITUTO EVANDRO CHAGAS

16:36 - LSS3.5

3D Interrelationship between Osteocyte Network and Mineral Forming during the Early Stage of a tibia Healing Process

Camila Hubner Costabile Wendt¹, Andre Linhares Rossi², Caio Márcio Sorrentino de Freitas Farias dos Santos¹, Victor Ramón Martínez Zelaya³, Ricardo Tadeu Lopes¹, Marcos Farina¹, Alexandre Malta Rossi²; ¹Universidade Federal do Rio de Janeiro, ²Centro Brasileiro de Pesquisas Físicas, ³Centro Nacional de Pesquisa em Energia e Materiais

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.LSS3.44 - 3D-EM ultrastructure of young trophozoite-Cyrtia lignieresi in the thrombocyte of the fish Synbranchus marmoratus

Brenda Santarém Fachetti¹, Maira Catherine Pereira Turiel¹, Camila Hubner Costabile Wendt², Edilene Oliveira da Silva³, Ana Paula Drummond Rodrigues⁴, Wanderley De souza², Kildare Miranda², José Antonio Picanço Diniz Junior⁴; ¹Universidade do Estado do Pará, ²Universidade Federal do Rio de Janeiro, ³Universidade Federal do Pará, ⁴INSTITUTO EVANDRO CHAGAS

PS-I.LSS3.45 - Development of biocompatible and osteoconductive vitreous silicon oxycarbide 3D scaffolds

Bruna Hilzendege Marcon¹, Daniele de Freitas Garcia¹, Matheus Carnieri², Ana Julia Curioni Rodrigues¹, Marco Augusto Stimamiglio¹, Lucas Freitas Berti², Alejandro Correa¹; ¹Instituto Carlos Chagas (Fiocruz/PR), ²Universidade Tecnológica Federal do Paraná

PS-I.LSS3.46 - Functionalization of 3D Alumina Scaffolds for Bone Tissue Regeneration

Daniele de Freitas Garcia¹, Gustavo Xavier Peres², Marco Augusto Stimamiglio¹, Lucas Freitas Berti², Bruna Hilzendege Marcon¹, Alejandro Correa¹; ¹Fundação Oswaldo Cruz, ²Universidade Tecnológica Federal do Paraná

PS-I.LSS3.47 - The Use of Microscopy Imaging to Unravel Mesenchymal Stem Cells Distribution and Morphology in a 3D Bioprinted Cartilage Tissue Biomimetic Construct

Raphaella Josino¹, Anny Waloski Robert Kulig¹, Bruna Hilzendege Marcon¹, Marco Augusto Stimamiglio¹; ¹Fundação Oswaldo Cruz

PS-I.LSS3.48 - Use of by-products derived from food processing for fabrication of a new biomaterial for tissue engineering: study of porosity, microarchitecture and cell interaction.

Rodrigo Vinicius Lourenço¹, Daniel Enrique López Angulo¹, Paulo José do Amaral Sobral¹; ¹Universidade de São Paulo

LSS4 - Cryo-EM of macromolecular assemblies

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION LSS4

10:20 - 12:00 - HERTHA MEYER

Chairs: Marin van Heel (CNPEM); Rodrigo Portugal (CNPEM);

10:20 - LSS4.1*

Cryo-EM reveals structures and activities of membrane remodeling proteins

Carsten Sachse¹; ¹Ernst Ruska-Centre, Forschungszentrum Juelich

10:50 - LSS4.2*

A Tale of Two Volumes, Developments in volume Electron Microscopy

Roland Fleck¹; ¹King's College London

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.LSS4.49 - Solving Protein Complexes: Producing Good Septin Complexes for Electronic Microscopy Analyses

Heloisa Ciol¹, Deborah Cesar Mendonça¹, Giovanna Christe dos Reis Saladino¹, Luis Alberto Valverde Fernández¹, Richard Charles Garratt¹, Ana Paula Ulian de Araujo¹; ¹Universidade de São Paulo

PS-I.LSS4.50 - Towards the structural characterization of the secretory tube of the Type VI Secretion System of *Klebsiella pneumoniae* by Single Particle Cryoelectron Microscopy

Maria Eduarda Ferreira do Rosário¹, Débora Caroline Amorim de Souza¹, Antonio Carlos Borges², Mariana Araújo Ajalla Aleixo², Rodrigo Villares Portugal², Marcel Menezes Lyra da Cunha¹, Gisele Cardoso de Amorim¹; ¹Universidade Federal do Rio de Janeiro, ²Centro Nacional de Pesquisa em Energia e Materiais

THURSDAY , NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.LSS4.17 - Development of a Microfluidic Device for Sample Preparation for Time-Resolved Electron Cryo-Microscopy

Daniela Cristina Serdan¹, Mariana Araújo Ajalla Aleixo¹, Luis Carlos Silveira Vieira¹, Maria Helena de Oliveira Piazzetta¹, Angelo Luiz Gobbi¹, Rodrigo Villares Portugal¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-II.LSS4.18 - Structural Comparison of Arboviruses

Katie Cristina Takeuti Riciluca¹, Sayan Bhakta¹, Rodrigo Villares Portugal¹, Marin van Heel¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-II.LSS4.19 - Investigating transport and signalling networks in the re-emerging pathogen Bordetella pertussis

Leonardo Talachia Rosa¹; ¹Universidade Estadual de Campinas

PS-II.LSS4.20 - SARS-Cov-2 Spike Protein as a Model for Ligand Screening Using Cryo-EM

Mariana Araújo Ajalla Aleixo¹, Matheus Pintor Baptista¹, Maxuel de Oliveira Andrade¹, Daniela Barretto Barbosa Trivella¹, Rodrigo Villares Portugal¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-II.LSS4.21 - Comparing all 3D Structures of SARS-CoV2 Spike proteins

Sayan Bhakta¹, Katie Cristina Takeuti Riciluca¹, Rodrigo Villares Portugal¹, Michael Schatz², Marin van Heel¹; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Image Science Software GmbH

LSS5 - Agriculture and Environment-Related research exploring microscopy tools

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION LSS5

10:20 - 12:00 - RITA LEVI-MONTALCINI

Chairs: Renato Grillo (UNESP); Claudia Franca Barros (JBRJ, DIPEQ);

10:20 - LSS5.1*

Biotic and Abiotic Protection of Colleters in Rubiaceae Species within the Amazonian Savannas and Atlantic Forest

Maura Da Cunha¹; ¹Universidade Estadual do Norte Fluminense Darcy Ribeiro

10:45 - LSS5.2*

MICROSCOPY AS A TOOL FOR ASSESSING THE FATE AND BEHAVIOR OF NANO-ENABLED AGROCHEMICALS

Renato Grillo¹; ¹Universidade Estadual Paulista

11:10 - LSS5.3

Understanding the interaction of a pesticide delivery system using gold nanoparticles as a label in aquatic plants

Mariana Monteiro de Lima Honorato Forini¹, Débora Ribeiro Antunes², Montcharles da Silva Pontes³, Luiz Aparecido Ferreira Cavalcante², Alex Otávio Sanches², Etenaldo Felipe Santiago³, Aline Redondo Martins¹, Arlene Souza Lessa⁴, Adriana Lanfredi Rangel⁴, Renato Grillo²; ¹São Paulo State University, ²Universidade Estadual Paulista, ³Universidade Estadual de Mato Grosso do Sul, ⁴Instituto Gonçalo Moniz, Fiocruz

11:23 - LSS5.4

Occurrence Of Microplastics In The Commercial Mussel *Mytella guyanensis* From An Amazonian Estuary

João Marcos Santos Rodrigues¹, Antonio Elivelton Paiva de Oliveira¹, Juliana Caroline Dias Pantoja¹, Yuri Wellington Machado Favacho¹, Maria Auxiliadora Pantoja Ferreira¹, Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará

11:36 - LSS5.5**Contamination Of Farmed Oysters (*Crassostrea gasar*) By Microplastics In The Amazon Estuary**

Juliana Caroline Dias Pantoja¹, Allex Sousa Paiva¹, Geovanna Sousa da Silva Chaves¹, Renata Silva de Oliveira¹, João Marcos Santos Rodrigues¹, Alecsander Marconi Furtado de Cristo¹, Yanne Alves Mendes¹, Rossineide Martins da Rocha¹; ¹Universidade Federal do Pará

POSTER PRESENTATIONS**THURSDAY , NOVEMBER 09****SESSION PS-II****17:30 - 18:30 - Exhibition Area****PS-II.LSS5.22 - Bioprocessing of agroindustrial and wood waste from the Amazon via solid state fermentation using *Ganoderma* spp.**

Aldenora dos Santos Vasconcelos^{1,2,3}, Sérgio Dantas de Oliveira Júnior³, Lorena Vieira Bentolila de Aguiar³, Paula Romenya dos Santos Gouvêa^{2,3}, Jander Matos Guimarães¹, Ceci Sales-Campos^{2,3}, Larissa Ramos Chevreuil³; ¹Universidade do Estado do Amazonas, ²Universidade Federal do Amazonas, ³Instituto Nacional de Pesquisas da Amazônia

PS-II.LSS5.23 - Evaluation of the Nettle Pollen (*Urticaceae*) Using Different Microscopic Techniques

Ana Julia Peracini¹, Paloma Gaspar Torratti-Guioti¹, Eduardo Custódio Gasparino², Simone de Pádua Teixeira¹; ¹Universidade de São Paulo, ²Universidade Estadual Paulista

PS-II.LSS5.24 - Biotic and Abiotic Protection of Colleters in Rubiaceae Species within the Amazonian Savannas and Atlantic Forest

Maura Da Cunha¹, Lucas Lima dos Reis¹, Ana luiza da Conceição Silva¹, Lais de Almeida Bezerra¹, Saulo Pireda¹, Renata Pergoral Amélia¹, Marcos José Pessoa², Fábio Lopes Olivares¹, Valdirene Moreira Gomes¹; ¹Universidade Estadual do Norte Fluminense Darcy Ribeiro, ²Universidade do Estado de Mato Grosso

PS-II.LSS5.25 - Standardization of Analytical Methods of Food Microscopy: Food Composition and Foreign Materials in Coffee

Ludilaine Fiuza Barreto de Oliveira¹, Laís Higino Doró¹, Giulia Amarante de Almeida Mussi da Silva¹, Osman Feitosa da Silva¹, Mirian Ribeiro Leite Moura¹, André Luis de Alcantara Guimarães¹; ¹Universidade Federal do Rio de Janeiro

PS-II.LSS5.26 - Effect Of Attraction Of The Trough In The Deposition Of Bovine Manure For Requalification Of Degraded Areas

Edla Rayane de Oliveira Lemos¹, Ana Gabriela de Freitas Maia¹, Arilene Franklin Chaves¹, Rodrigo Gregório da Silva¹; ¹Instituto Federal de Educação, Ciência e Tecnologia do Ceará

PS-II.LSS5.27 - Microanalysis Of The Sediment Quality Of A Carciniculture Nursery After Cultivation: Case Study In Shrimp Farm In Limoeiro Do Norte.

Edla Rayane de Oliveira Lemos¹, Claudiana Alexandre de Lima¹, José William Alves da Silva¹, Marlene Nunes Damaceno¹, Maria Gizeuda de Freitas¹; ¹Instituto Federal de Educação, Ciência e Tecnologia do Ceará

PS-II.LSS5.28 - Azadirachtin and Pyriproxyfen Exposition Not Impair on Reproduction of Male Insects of the Natural Enemy *Ceraeochrysa claveri* (Neuroptera: Chrysopidae)

Daniela Carvalho dos Santos¹, Ana Silvia Gimenes Garcia¹, Elton Luiz Scudeler¹, Carlos Roberto Padovani¹, Jefferson Fogaça Tomacheski¹; ¹Universidade Estadual Paulista

PS-II.LSS5.29 - Microscopic Evaluation Of Fig Modifications Along Its Reproductive Cycle In A Brazilian Fig Tree (*Ficus citrifolia* Mill. - Moraceae)

Felipe Paulino Ramos¹, Jackeline Varanda Silva¹, Ana Julia Peracini¹, Simone de Pádua Teixeira¹; ¹Universidade de São Paulo

PS-II.LSS5.30 - Unraveling the development and secretory structures of the atypical flowers of *Dalea purpurea* (Leguminosae: Papilionoideae)

Santiago Macario Martins¹, Vidal de Freitas Mansano², Viviane Gonçalves Leite³, Juliana Villela Paulino¹; ¹Universidade Federal do Rio de Janeiro, ²Jardim Botânico do Rio de Janeiro, ³Universidade de São Paulo

PS-II.LSS5.31 - Characterization of a Fungus Contaminating the Ornithology Sector Collection of the Museu Nacional/UFRJ

Luana Pereira Borba dos Santos¹, Emanuella Figueiredo de Menezes¹, Lorian Cobra Straker², Renata Stopiglia¹, Marcos Raposo¹, Sonia Rozental¹; ¹Universidade Federal do Rio de Janeiro, ²Centro Nacional de Biologia Estrutural e Bioimagem

PS-II.LSS5.32 - 3D Reconstruction Of Serial Sections And Histochemistry Provides An Insight On The Unusual Leaf Nectary In *Gouania polygama* (Jacq.) Urb. (Rhamnaceae)

Lucas Iwamoto¹, Thales Augusto Vicentini¹, Felipe Paulino Ramos¹, Simone de Pádua Teixeira¹; ¹Universidade de São Paulo

PS-II.LSS5.33 - Visualization of the Eco-Corona in PVP-AgNPs by EFTEM Technique

Gabriela H. da Silva¹, Francine Côa¹, Luiza Eduarda Santana de Souza¹, Luelc Souza da Costa¹, Fabrício de Souza Delite¹, Jefferson Bettini¹, Iseult Lynch², Diego Stéfani Teodoro Martinez¹; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²University of Birmingham

PS-II.LSS5.34 - EXPERIMENTAL STUDY OF THE INTERACTION OF SILVER NANOPARTICLES WITH LETTUCE SEEDS

Débora Ribeiro Antunes¹, Luiz Aparecido Ferreira Cavalcante¹, Mariana Monteiro de Lima Honorato Forini¹, Yasmin Amadio Coqueiro¹, Montcharles da Silva Pontes², Alex Otávio Sanches¹, Pedro

Henrique Correia de Lima¹, Etenaldo Felipe Santiago², Renato Grillo¹; ¹Universidade Estadual Paulista, ²Universidade Estadual de Mato Grosso do Sul

PS-II.LSS5.35 - Synthesis and characterization of hybrid supraparticles with the potential to release agricultural inputs

Mariana Monteiro de Lima Honorato Forini¹, Pedro Henrique Correia de Lima¹, Débora Ribeiro Antunes¹, Luiz Aparecido Ferreira Cavalcante¹, Renato Grillo¹; ¹São Paulo State University

LSS6 - Super-resolution microscopy

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION LSS6

15:20 - 17:00 - HERTHA MEYER

Chairs: Adán Guerrero (UNAM); Dawidson Assis Gomes (UFMG);

15:20 - LSS6.1*

Single Frame Superresolution Microscopy. Is it a Myth?

Adán Guerrero¹; ¹Universidad Nacional Autónoma de México

15:45 - LSS6.2*

Using super-resolution microscopy to study nuclear calcium signaling

Michele Angela Rodrigues¹; ¹Centro de Desenvolvimento da Tecnologia Nuclear

16:10 - LSS6.3

Comparison of Protocols for Observation of Solanum tuberosum L. by Field Emission Scanning Electron Microscopy

Luis Otávio da Silva Pacheco¹, Marcia Attias¹, Ricardo P. Louro¹; ¹Universidade Federal do Rio de Janeiro

LSS7 - Microscopy applied to Medical Science

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION LSS7

15:20 - 17:00 - RITA LEVI-MONTALCINI

Chair: Marco Cesar Cunegundes Guimarães (SBMM);

15:20 - LSS7.1*

Vascular cell phenotype and vascular remodeling induced by mechanical stress

Ayumi Aurea Miyakawa¹; ¹Instituto do Coração

15:50 - LSS7.2

Lack of Endogenous Annexin A1 in a Streptozotocin-Induced Diabetic Mouse Model: Effect on the Liver

Diego Dias dos Santos¹, Rafael Andre da Silva², Luiz Philipe de Souza Ferreira¹, Paulo Celso Franco¹, Cristiane Damas Gil¹; ¹Universidade Federal de São Paulo, ²Universidade Estadual Paulista

16:20 - LSS7.3

Role of Electron Microscopy in Studies of Agents with Major Impact on Global Human Health: SARS-Cov-2 and Mpox

Debora Ferreira Barreto Vieira¹, Milene Dias Miranda², Marcos Alexandre Nunes da Silva¹, Marilda M. Siqueira², Edson Elias da Silva², Patrícia T. Bozza², Thiago Moreno Souza², Wendell Girard Dias², Valdiléa Gonçalves Veloso², Braulio Soares Archanjo³, Ortrud Monika Barth²; ¹Fundação Oswaldo Cruz, ²Fiocruz, ³Instituto Nacional de Metrologia, Qualidade e Tecnologia

16:30 - LSS7.4

MG-Pe Polysaccharide: Antimelanoma Effects in The Tumor Microenvironment

Stellee Marcela Petris Biscaia¹; ¹Universidade Federal do Paraná

16:40 - LSS7.5

An integrated non-linear optical microscopy platform applied to the study of biological materials.

Antonio Thiago Pereira Campos¹, Francisco Breno S. Teófilo^{2,3}, Aline Siqueira-Berti², Mariana O. Baratti³, Vitor B. Pelegati³, Carlos Lenz César^{1,3}, Hernandes Faustino de Carvalho^{2,3}; ¹Universidade

Federal do Ceará, ²Universidade Estadual de Campinas, ³Instituto Nacional de Ciência e Tecnologia de Fotônica Aplicada a Biologia Celular

POSTER PRESENTATIONS

THURSDAY , NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.LSS7.36 - The Increasing Accumulation of Microplastics in Human Placentas Through Time Observed by Atomic Force Microscopy and Raman Spectroscopy

Aldilane Lays Xavier Marques¹, Flavio DAmato¹, Laís Farias Azevedo de Magalhães Oliveira¹, Mariana Lima Dutra¹, Samuel Teixeira Souza¹, Eduardo Jorge da Silva Fonseca¹, Ueslen Rocha Silva¹, Rodrigo Barbano Weingrill², Men Lee², Paula Benny², Jacob Garcia², Jonathan Riel², Kevin Saiki², Johann Urschitz², Alexandre Urban Borbely¹; ¹Universidade Federal de Alagoas, ²University of Hawaii at Manoa

PS-II.LSS7.37 - Characterization of Cardiac Extracellular Matrix Hydrogel

Ezio Henrique da Silva Gomes¹, Layana Nascimento Silva Lisboa¹, Tadeu Ériton Caliman Zanardo¹, Marcos André Soares Leal¹, Breno V Nogueira¹; ¹Universidade Federal do Espírito Santo

PS-II.LSS7.38 - Evaluation Of Dichloroacetate As A Protector Against the Gonadotoxic Effects Of Vincristine On The Ovary

Agustina Toledo¹, Karina Hernández¹, Dana Kimelman², Rebeca Chávez-Genaro¹, Gabriel Anesetti¹; ¹Facultad de Medicina, Universidad de la República, ²Centro de Esterilidad Montevideo

PS-II.LSS7.39 - Evaluation Of Sheep Primordial Follicles After Vitrification And Culture.

Rebeca Chávez-Genaro¹, Lorena Bonjour¹, Ma. Clara Fernández¹, Agustina Toledo¹, Gabriel Anesetti², Dana Kimelman³; ¹Facultad de Medicina, Universidad de la República, ²Universidad de la República, ³Centro de Esterilidad Montevideo

PS-II.LSS7.40 - Copper Oxide Nanorods As Possible Antitumor Therapy For Breast Cancer.

Giovanna de Carvalho Nardeli Basílio Lôbo¹, Karine Brenda Barros-Cordeiro¹, Ingrid Gracielle Martins da Silva¹, Matheus Pereira Sales¹, Leonardo Giordano Paterno¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-II.LSS7.41 - Climate Changes Expected By 2100 May Affect *Aedes Aegypti* Egg Ultrastructure?

Joaquim Ferreira do Nascimento Neto¹, Rosemary Aparecida Roque¹, Jander Matos Guimarães², Jéssica Araújo Marques², Aldenora dos Santos Vasconcelos², Francisco Augusto da Silva Ferreira¹, Fabiola Thayla Rodrigues do Nascimento¹, Isabella Amazonas Silva¹, Wanderli Pedro Tadei (in

memoriam)¹, Adalberto Luis Val¹; ¹Instituto Nacional de Pesquisas da Amazônia, ²Universidade do Estado do Amazonas

PS-II.LSS7.42 - Effect of Cold Atmospheric Plasma (CAP) Treatment in Squamous Cell Carcinoma Cells

Luiz Emanuel Campos Francelino^{1,2}, Gabriel de Moura Martins³, Vladimir Galdino Sabino^{4,3}, Carlos Augusto Galvão Barboza³, Moacir Franco de Oliveira², Clodomiro Alves Junior², Carlos Eduardo Bezerra de Moura²; ¹Universidade Federal Rural do Semi, ²Universidade Federal Rural do Semi-Árido, ³Universidade Federal do Rio Grande do Norte, ⁴Universidade Federal do Pará

PS-II.LSS7.43 - Bone Loss Prevention by Nanostructured Doxorubicin Treatment for Breast Cancer

Marina Arantes Radicchi¹, Gabriel Ribeiro Farias¹, Victor Carlos Mello¹, Joao Paulo Figueiro Longo¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-II.LSS7.44 - Radiofrequency Interference In The Tumoral Internalization Of Gold And Graphene Oxide Nanostructures During Combined Therapy In Vivo In The Walker 256 Tumor Model

Melissa Silva Monteiro¹, Giovanna de Carvalho Nardeli Basílio Lôbo¹, Henry Thomas Pereira Santana¹, Karine Brenda Barros Cordeiro¹, Ingrid Gracielle Martins da Silva¹, Raquel das Neves Almeida¹, Ellen Caroline Feitoza Pires¹, Leonardo Giordano Paterno¹, Suélia Siqueira Rodrigues Fleury Rosa¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-II.LSS7.45 - Effect of Carbon Nitride on Ultrastructure of Candida albicans

Newton Soares da Silva¹, Ganesh K. Arumugam², Sivaraj Durairaj³, Paulo H. Fonseca do Carmo¹, Juliana Caparroz Gonçale¹, Maíra Terra Garcia¹, Juliana Campos Junqueira¹; ¹Universidade Estadual Paulista, ²Bharathidasan University Trichy, ³Institute of Nano Science and Technology

PS-II.LSS7.46 - Action of Photodynamic Therapy on the Viability of Spheroids from Breast Cancer Cells

Newton Soares da Silva¹, Mariela Inês Batista dos Santos², Bruno Henrique Godoi², Cristina Pacheco-Soares²; ¹Universidade Estadual Paulista, ²Universidade do Vale do Paraíba

PS-II.LSS7.47 - Changes in the Steroidogenic Activity of Testis of K18-hACE2 Mice Infected with SARS-CoV-2

Salmo Azambuja de Oliveira¹, André Acácio Souza da Silva¹, Giovanni Freitas Gomes², Thiago Mattar Cunha², Paulo Sérgio Cerri³, Estela Sasso-Cerri³; ¹Universidade Federal de São Paulo, ²Universidade de São Paulo, ³Universidade Estadual Paulista

LSS8 - Live Imaging of Cells, Tissues and Organisms

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION LSS8

10:20 - 12:00 - RITA LEVI-MONTALCINI

Chair: Carlos Lenz Cesar (UFC);

10:20 - LSS8.1*

Intracellular calcium signaling pathways: A matter of life and death

Dawidson Assis Gomes¹; ¹Universidade Federal de Minas Gerais

10:50 - LSS8.2*

Optical microscopy: state of the art and perspectives

Hernandes Faustino de Carvalho^{1,2}; ¹Universidade Estadual de Campinas, ²Instituto Nacional de Ciência e Tecnologia de Fotônica Aplicada a Biologia Celular

11:20 - LSS8.3*

Optical Microscopies: what is new!

Carlos Lenz Cesar¹; ¹Universidade Federal do Ceará

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.LSS8.47 - Ultrastructural analysis of hyphal organization changes in an Amazonian Ganoderma sp.

Vítor Alves Pessoa^{1,2}, Aldenora dos Santos Vasconcelos^{3,1,2}, Danielle Furtado da Silva^{3,2}, Ceci Sales-

Campos^{3,1,2}, Larissa Ramos Chevreuil²; ¹Universidade Federal do Amazonas, ²Instituto Nacional de Pesquisas da Amazônia, ³Universidade do Estado do Amazonas

PS-III.LSS8.48 - Morphological Characterization of Terminalias of *Toxomerus lacrymosus* (Bigot, 1884) and *Toxomerus politus* (Say, 1823) (Diptera: Syrphidae) using Scanning Electron Microscopy

Ingrid Gracielle Martins da Silva¹, Karine Brenda Barros Cordeiro¹, Welinton Ribamar Lopes², Sônia Nair Bão¹; ¹Universidade de Brasília, ²Universidade Federal de Goiás

PS-III.LSS8.49 - Structural and Chemical Aspects of *Varronia curassavica* (Jacq.) Boraginaceae Leaves and their Potential Larvicidal Activity against *Aedes aegypti* Larvae

Marcela Rezende Cordeiro¹, Saulo Pireda¹, Rodrigo Barbosa Braga Feitoza¹, Maria Aparecida Aride Bertonecelli¹, Thalya Soares Ribeiro Nogueira¹, Nicolly Lopes Bautz¹, Kátia Valevski Sales Fernandes¹, Ivo José Curcino Vieira¹, Raimundo Braz Filho², Francisco José Alves Lemos¹, Maura Da Cunha¹; ¹Universidade Estadual do Norte Fluminense Darcy Ribeiro, ²Universidade Federal Rural do Rio de Janeiro

PS-III.LSS8.50 - Scanning Electron Microscopy (SEM) in the description of a new species of the genus *Alippistrongylus* (Nematoda: Trichostrongylina)

Débora Sá Lemes¹, Beatriz Elise Andrade-Silva², Paulo Eduardo Robaina Medina¹, Arthur Bessi Machado¹, Taíssa Barcelos Casanova da Silva¹, Arnaldo Maldonado Junior², Raquel de Oliveira Simões¹; ¹Universidade Federal Rural do Rio de Janeiro, ²Instituto Oswaldo Cruz - Fiocruz

PS-III.LSS8.51 - Importance of using Scanning Electron Microscopy (SEM) in the description of a new species of the genus *Centorhynchus* (Centrohynchidae, Acanthocephala).

Paulo Eduardo Robaina Medina¹, Ana Paula Nascimento Gomes², Arnaldo Maldonado Júnior², Daniel Guimarães Ubiali¹, Asheley Henrique Barbosa Pereira¹, Eduardo José Lopes-Torres², Raquel de Oliveira Simões¹; ¹Universidade Federal Rural do Rio de Janeiro, ²Instituto Oswaldo Cruz - Fiocruz

PS-III.LSS8.52 - The Thiosemicarbazone PA4 Induces Morphological Changes and Inhibits Migration of Human Cervical Carcinoma HeLa Cells

Renan Vinícius de Oliveira Nocetti¹, Karina Miyuki Retamiro¹, Paulo André Teixeira de Moraes Gomes², Ana Cristina Lima Leite², Sueli de Oliveira Silva¹, Danielle Lazarin Bidoia¹, Tânia Ueda Nakamura¹, Francielle P. Garcia¹, Celso Vataru Nakamura¹; ¹Universidade Estadual de Maringá, ²Universidade Federal de Pernambuco

LSS9 - Microscopy imaging of pathogens, host and their interactions I

ORAL PRESENTATIONS

* Invited Lecture

FRIDAY , NOVEMBER 10

SESSION LSS9

10:20 - 12:00 - GERTRUDE REMPFER

Chair: Marcia Attias (UFRJ);

10:20 - LSS9.1*

Spatially resolved ion nanodomains in sub cellular compartments of Trypanosoma cruzi

Kildare Miranda¹; ¹Universidade Federal do Rio de Janeiro

10:55 - LSS9.2

Sars-CoV-2-increased hACE2 Expression in Epididymis of K18-hACE2 Transgenic Mice

André Acácio Souza da Silva¹, Salmo Azambuja de Oliveira¹, Giovanni Freitas Gomes², Thiago Mattar Cunha², Paulo Sérgio Cerri³, Estela Sasso-Cerri³; ¹Universidade Federal de São Paulo, ²Universidade de São Paulo, ³Universidade Estadual Paulista

11:10 - LSS9.3

Tissue Damages Caused By The Soil-Transmitted Helminth Whipworm Explored By Scanning Electron Microscopy And 3D Modeling

Brunna Vianna Braga¹, Dayane Alvarinho de Oliveira¹, Renato Menezes de Oliveira¹, Lorian Cobra Straker², Eduardo José Lopes-Torres^{1,3}; ¹Universidade do Estado do Rio de Janeiro, ²Centro Nacional de Biologia Estrutural e Bioimagem, ³Sociedade Brasileira de Microscopia e Microanálise

11:25 - LSS9.4

Role of the Microbiota in the Pathogenesis and Prevention of Human Giardiasis

Bruno Santos Alves Vicente¹, Rebeca Vitoria da Silva Lage de Miranda¹, Luciana Veloso da Costa¹, Marcelo Luiz Lima Brandão¹, Tatiana Galvão de Melo de Oliveira¹, Victor do Valle Pereira Midlej¹; ¹Fundação Oswaldo Cruz

11:40 - LSS9.5

Initial Process of Infection of Different Leishmania Species in Fibroblasts in 2D and 3D Models

Rebecca Thereza Silva Santa Brígida^{1,2}, Adeniele Lopes da Cruz Carneiro^{3,2}, Brenda Furtado Costa^{1,2},

Ana Paula Drummond Rodrigues²; ¹Universidade Federal do Pará, ²INSTITUTO EVANDRO CHAGAS, ³Universidade do Estado do Pará

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.LSS9.53 - Ultrastructural characterization of *Ophiotaenia arandasi* (Eucestoda: Proteocephalidae) parasite of *Erythrolamprus taeniogaster* (Ophidia: Dipsadidae) from the Brazilian eastern Amazon

Luiz Felipe Ferreira Trindade¹, Jorge Kevin da Silva Neves¹, Adriano José Silva Félix¹, Gabriel Lima Rebêlo¹, Talita Pantoja Ribeiro¹, Alexandro Sousa Santos¹, Jeannie Nascimento dos Santos¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará

PS-III.LSS9.54 - Evaluation of the Activity of the Cannabinoids WIN 55,212-2 and Cannabivarin Against *T. vaginalis* *in vitro*

Anna Victória de Freitas Silva¹; ¹Fundação Oswaldo Cruz

PS-III.LSS9.55 - Untangling the diversity of species of the genus *Mesocoelium* using light microscopy

Bianca Nandyara¹, Yuri Willkens de Oliveira Costa¹, Leandro Maurício Oliveira Silva¹, Ronald Ferreira Jesus¹, Francisco Tiago de Vasconcelos Melo¹; ¹Universidade Federal do Pará

PS-III.LSS9.56 - Ultrastructural Analysis of the Effects of a 1,2,4-Oxadiazole Derivative on *Leishmania infantum*

Deyzi Caroline da Silva Barbosa¹, Ronaldo Nascimento de Oliveira², REGINA CELIA BQ de Figueiredo¹; ¹Instituto Aggeu Magalhães - Fiocruz Pernambuco, ²Universidade Federal Rural de Pernambuco

PS-III.LSS9.57 - Polymeric Nanoparticle Containing Kojic Induces Ultrastructural Alteration in *Leishmania (Leishmania) amazonensis*.

Poliana Dimsan¹, Adam Galue Parra¹, Lienne Silveira Moraes¹, Caroline Gomes Macedo¹, Ana Paula Drummond Rodrigues², Irlon Maciel Ferreira³, Edilene Oliveira da Silva¹; ¹Universidade Federal do Pará, ²INSTITUTO EVANDRO CHAGAS, ³Universidade Federal do Amapá

PS-III.LSS9.58 - Life cycle of *Metarhabditis costai* explored by scanning electron microscopy

Julia Rodrigues Genuncio¹, Ander Castello Branco Santos¹, Eduardo José Lopes-Torres^{1,2}, Brunna

Vianna Braga¹; ¹Universidade do Estado do Rio de Janeiro, ²Sociedade Brasileira de Microscopia e Microanálise

PS-III.LSS9.59 - Excretory-secretory products of *T. muris* in assays of bacterial interaction

Larissa Trotta Barroso de Oliveira¹, Peterson Hotz¹, Eduardo José Lopes-Torres^{1,2}; ¹Universidade do Estado do Rio de Janeiro, ²Sociedade Brasileira de Microscopia e Microanálise

PS-III.LSS9.60 - Evaluation Of The Glucosylceramide Role In The *Aspergillus Nidulans* Biofilm Formation

Caroline Corrêa-Almeida¹, Luana Pereira Borba dos Santos¹, Dario Corrêa-Junior¹, Susana Frases¹, Sonia Rozental¹, Eleonora Kurtenbach¹; ¹Universidade Federal do Rio de Janeiro

PS-III.LSS9.61 - Piper Marginatum Essential Oil Disrupts the Morphology of *Trypanosoma cruzi* Plasma Membrane

Luis Henrique Dalbello Yamashita¹, Caroline Gomes Macêdo², Rayanne Regina Beltrame Machado¹, Kelly Christina Ferreira Castro², Marcelo Neves Tanaka³, Edilene Oliveira da Silva³, Tânia Ueda Nakamura¹, Danielle Lazarin Bidoia¹, Celso Vataru Nakamura¹; ¹Universidade Estadual de Maringá, ²Universidade Federal do Oeste do Pará, ³Universidade Federal do Pará

PS-III.LSS9.62 - Unveiling the Ultrastructural Organization of *Paratrypanosoma confusum* Through Cryo-Electron Tomography

Carolina de Lima Alcantara¹, Matthias Pöge², Jürgen Plitzko², Wolfgang Baumeister², Wanderley de Souza^{3,1}; ¹Universidade Federal do Rio de Janeiro, ²Max Planck Institute of Biochemistry, ³Universidade do Estado do Amazonas

PS-III.LSS9.63 - Towards an oriented ultrastructural study of the hyphae development of the pathogenic fungi *Candida albicans*

Rayane Gonçalves Pereira da Silva¹, Joice Ferreira da Silva¹, Marcel Menezes Lyra da Cunha¹; ¹Universidade Federal do Rio de Janeiro

PS-III.LSS9.64 - Biological Activity of Silver Nanoparticles Derived from *Fusarium solani* Against *Leishmania (Leishmania) amazonensis* and Host Cells

Rebecca Thereza Silva Santa Brígida^{1,2}, Ana Patricia Cacia Gélvez^{1,2}, Ana Paula Drummond Rodrigues²; ¹Universidade Federal do Pará, ²INSTITUTO EVANDRO CHAGAS

PS-III.LSS9.65 - TEM used to investigate the effects of new lysine deacetylase inhibitors as an alternative for the treatment of acute ocular toxoplasmosis

Carlla Assis de Araujo e Silva^{1,2}, Milena Ribeiro Peclat de Araujo^{1,2}, Wanderley de Souza^{3,1,4}, Rossiane Claudia Vommaro^{1,2}; ¹Universidade Federal do Rio de Janeiro, ²Instituto Nacional de Ciência e Tecnologia em Biologia Estrutural e Bioimagens- UFRJ, ³Universidade do Estado do Amazonas, ⁴Centro Nacional de Biologia Estrutural e Bioimagem

PS-III.LSS9.66 - Cytoskeleton of *Trichomonas vaginalis*: Recent Observations

Marlene Benchimol^{1,2}, Sharmila Fiana das Neves Ortiz³, Raphael Verdan Curti³, Gustavo Miranda Rocha⁴, Wanderley de Souza^{5,3,2}; ¹Unigranrio- Programa de Pós-graduação em Biomedicina

Translacional, ²Centro Nacional de Biologia Estrutural e Bioimagem, ³Universidade Federal do Rio de Janeiro, ⁴Universidade do Estado do Rio de Janeiro, ⁵Universidade do Estado do Amazonas

PS-III.LSS9.67 - Comparative study on the preservation of cell surface projections in *Trichomonas vaginalis* using two drying methods for scanning electron microscopy

Tuanne dos Santos Melo¹, Antonio Pereira-Neves¹; ¹Instituto Aggeu Magalhães - Fiocruz Pernambuco

MS1 - Electron microscopy and spectroscopy of nanostructures and engineering materials

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION MS1

10:20 - 12:00 - GERTRUDE REMPFER

Chair: Karla Balzuweit (UFMG);

10:20 - MS1.1*

Understanding Catalyst Nanoparticles by 2D and 3D Identical Location Aberration Corrected TEM/STEM

Paulo Ferreira^{1,2}; ¹Universidade de Lisboa, ²International Iberian Nanotechnology Laboratory

10:50 - MS1.2

Cryo-TEM of the nucleation, growth and crystallization processes of calcium carbonate

Noemi Raquel Checca Huaman¹, Alexandre Malta Rossi¹, Andre Linhares Rossi¹; ¹Centro Brasileiro de Pesquisas Físicas

11:05 - MS1.3

Heterojunction of TiO₂ Nanotubes @MoS₂ quantum dots for green hydrogen production per photoelectrocatalysis

Leonardo José Lins Maciel¹, Felipe Leon Nascimento de Sousa¹, Denilson V. Freitas¹, Luana Beatriz Correia de Oliveira¹, Francisco de Assis Sales Ribeiro¹, Giovanna Machado¹; ¹Centro de tecnologias estratégicas do Nordeste

11:15 - MS1.4

Sulfur-modified FeBTC metal-organic frameworks for improved photodegradation of methylene blue

Brenand Anjos dos Santos Souza¹, Denilson V. Freitas², Giovanna Machado², Marcelo Navarro¹; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste

11:30 - MS1.5

Superhydrophobic properties and biomimetic potential of leaves from endemic vegetal species of the Brazilian semi-arid

Felipe Leon Nascimento de Sousa¹, Lizeth Carolina Mojica Sánchez¹, Petrus Santa-Cruz²; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

11:45 - MS1.6

High-Resolution Structural Analysis of Controlled Engineering of Basal Plane Defects in Free-Standing Ultra-Large MoS₂ Monolayers for Hydrogen Production.

Carlos Alberto Ospina Ramirez¹, Bianca Rocha Florindo¹, Leonardo Hideki Hasimoto^{2,1}, Nicolli de Freitas¹, Graziâni Candioto³, Erika Nascimento Lima^{4,1,5}, Cláudia de Lourenço^{6,1}, Jefferson Bettini¹, Edson Roberto Leite¹, Renato Sousa Lima^{6,7,2,1}, Rodrigo Barbosa Capaz^{3,1}, Murilo Santhiago^{2,1}; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Universidade Federal do ABC, ³Universidade Federal do Rio de Janeiro, ⁴Universidade Federal de Mato Grosso, ⁵Universidade Federal de Rondonópolis, ⁶Universidade Estadual de Campinas, ⁷Universidade de São Paulo

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.MS1.52 - The Use Of Natural Solvents For The Maintenance And Preservation Of Lipid Nanostructures Under Freezing Conditions

Isadora Florêncio de Souza¹, Victor Carlos Mello¹, Sônia Nair Bão¹; ¹Universidade de Brasília

PS-I.MS1.53 - Analytical Electron Microscopy of Multi-Phase Grain Boundary Precipitation Phenomena in a Cr-Fe-Ni-Based Alloy

Julio Spadotto¹, Mary Grace Burke², Guillermo Solórzano-Naranjo³; ¹University of Manchester, ²Idaho National Laboratory, ³Pontifícia Universidade Católica do Rio de Janeiro

PS-I.MS1.54 - Microstructural Characterization of Pack Chromizing AISI M2 Tool Steel Produced by Microwave Hybrid Heating

Juno Gallego¹, Luciana Takahashi¹, Vitor Silveira Rolin¹; ¹Universidade Estadual Paulista

PS-I.MS1.55 - Superconductivity in Bi/Ni bi-layer system: Co-existence of two superconducting phases in Ni/Bi bilayers

Liyang Liu¹, Yutao Xing², Isabel Liz Castro Merino¹, Elisa Baggio Saitovitch¹, Dante Ferreira Franceschini Filho², Guillermo Solórzano-Naranjo³; ¹Centro Brasileiro de Pesquisas Físicas, ²Universidade Federal Fluminense, ³Pontifícia Universidade Católica do Rio de Janeiro

PS-I.MS1.56 - Conversion of electroplated BiOI to BiVO₄ nanostructures dedicated to photoelectrocatalytic hydrogen generation

Luana Beatriz Correia de Oliveira¹, Felipe Leon Nascimento de Sousa², Denilson V. Freitas², Maria Eduarda Ribeiro da Silva¹, Larissa Giovanna Campos Silva³, Marcelo Navarro¹, Giovanna Machado^{1,2}; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste, ³Universidade Federal Rural de Pernambuco

PS-I.MS1.57 - The Impact of Crystallization in the Properties and Applications of Solid Lipid Nanoparticles

Luane de Almeida Salgado¹, Isadora Florêncio de Souza¹, Sônia Nair Bão¹, Victor Carlos Mello¹; ¹Universidade de Brasília

PS-I.MS1.58 - Effect of Mg²⁺ on calcium carbonate crystallization: a nanostructural analysis by Cryo-TEM

Maria Carolina Lopes Leão Silva^{1,2}, Alexandre Malta Rossi², Andre Linhares Rossi², Noemi Raquel Checca Huaman²; ¹Universidade Federal do Rio de Janeiro, ²Centro Brasileiro de Pesquisas Físicas

PS-I.MS1.59 - Structural Modifications of Amorphous Polymer-like Carbon Nanoparticles by He Plasma Treatment

Ramon Pinna Brito¹, Cauê de Souza Coutinho Nogueira¹, Dante Ferreira Franceschini Filho¹; ¹Universidade Federal Fluminense

PS-I.MS1.60 - Exploring Cross-Sectional Morphology of Polymer Membranes via Scanning Electron Microscopy

Rayanne Penha Wandenkolken Lima¹, Camila Alves Schimidel¹, Erica Bezerra de Farias¹, Eloi Alves da Silva Filho¹; ¹Universidade Federal do Espírito Santo

PS-I.MS1.61 - Thermoplastic Corn Starch/Viscose Fibers Waste Biocomposites Prepared By Compression Molding

Renan Ferreira Menegassi de Souza¹, Márcia Aparecida da Silva Spinacé¹; ¹Universidade Federal do ABC

PS-I.MS1.62 - Exploring YAG/Al₂O₃ Nanoceramic Composites: Comprehensive Analysis using Advanced Transmission Electron Microscopy Techniques

Tarcísio Micheli Perfecto¹, Igor Barbosa da Cruz¹, Vinícius Fortes Carvalho¹, Edson Roberto Leite¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

PS-I.MS1.63 - Effect of CO₂ Laser Power on Laser-Induced Graphene Film Formation: Morphological Insights from Scanning Electron Microscopy

Thiago André Salgueiro Soares^{1,2}, Otávio A. Lima Alves², Cícero Inácio da Silva Filho², Giovanna Machado²; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste

PS-I.MS1.64 - Morphology and Composition of Hybrid TiO₂@CuO Nanotubes for Photocatalytic Application: A Comparative Microscopy Approach

Vanessa Natalia de Lima¹, Carine Emile Menezes Lagrange¹, Paula Quitério², Bruna Rafaela Silva Ibiapina^{1,3}, Arlete Apolinário², Giovanna Machado^{4,1}; ¹Centro de tecnologias estratégicas do

Nordeste, ²Instituto de Física dos Materiais da Universidade do Porto, ³Universidade Federal do Pernambuco, ⁴Universidade Federal de Pernambuco

PS-I.MS1.65 - Development of Green Nanotechnology Based on Amazonian Butter for Application in Antimelanoma Photodynamic Therapy

Victor Carlos Mello¹, Sônia Nair Bão¹, Marina Mesquita Simões¹, Karen Letycia de Paiva¹, Isadora Florêncio de Souza¹, Dafne Caroline Marques¹, Luis Alexandre Muehlmann¹; ¹Universidade de Brasília

PS-I.MS1.66 - Structural Characterization of the equiatomic AlTiNb multiprincipal element alloy.

Vitor Aníbal do Sacramento Mendes¹, Renato Belli Strozi¹, Walter José Botta Filho¹, Guilherme Zepon¹; ¹Univerdade Federal de São Carlos

PS-I.MS1.67 - Bismuth nanowires in system Bi/Ni prepared by pulsed laser deposition and possible growth mechanism

Yngrid Simen¹, Liying Liu², Ângela Caroliny Agra Pinto¹, Isabel Liz Castro Merino², Elisa Baggio Saitovitch², Andrea Brito Latge¹, Yutao Xing¹; ¹Universidade Federal Fluminense, ²Centro Brasileiro de Pesquisas Físicas

FRIDAY , NOVEMBER 10

SESSION PS-III

17:30 - 18:30 - Exhibition Area

PS-III.MS1.70 - Hollow Aluminum Oxide Particles Using Modified Spherical Carbon Templates

Marla Almeida Siqueira¹, João Pedro Massaria de Arcanto¹, Cleocir Jose Dalmaschio¹; ¹Universidade Federal do Espírito Santo

MS2 - Advanced Imaging and Spectroscopy for materials applied to Sustainable processes

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION MS2

10:20 - 12:00 - JUNE ALMEIDA

Chair: Yutao Xing (UFF);

10:20 - MS2.1*

The role of correlative CT and TEM investigations in the development of battery technology

Joachim Mayer¹; ¹RWTH Aachen University

10:40 - MS2.2*

Utilizing Electron Microscopes in Materials Science and Nanotechnology for Advancing Sustainable Processes: A Nanocarbon Case Study

Braulio Soares Archanjo¹; ¹Instituto Nacional de Metrologia, Qualidade e Tecnologia

11:00 - MS2.3*

Understanding Materials Degradation Phenomena: The Role of In Situ Analytical Electron Microscopy

Mary Grace Burke¹; ¹Idaho National Laboratory

11:20 - MS2.4

Structural, Chemistry, and Electronic State of The Interfaces Between Transparent Conducting Oxide and Hematite Applied in Photoelectrocatalysis

Gabriel Trindade dos Santos^{1,2}, Karen Cristina Bedin², Tanna E. R. Fiuza², Ingrid Guadalupe

Rodriguez Gutierrez², Paulo F. P. Fichtner¹, Flavio Leandro de Souza², Jefferson

Bettini²; ¹Universidade Federal do Rio Grande do Sul, ²Centro Nacional de Pesquisa em Energia e Materiais

11:35 - MS2.5

Light absorption enhancement by semiconductor hierarchization: TiO₂ (1D) nanotubes and CdTe (0D) quantum dots system

Maria Eduarda Ribeiro da Silva¹, Dayane Santos Marques¹, Luana Beatriz Correia de Oliveira²,

Denilson V. Freitas², Felipe Leon Nascimento de Sousa², Marcelo Navarro¹, Giovanna Machado²; ¹Universidade Federal de Pernambuco, ²Centro de tecnologias estratégicas do Nordeste

POSTER PRESENTATIONS

WEDNESDAY, NOVEMBER 08

SESSION PS-I

17:30 - 18:30 - Exhibition Area

PS-I.MS2.68 - Wettability of manganese oxide nanostructures prepared by pulsed laser deposition

Ana Carolina Porto Ferreira¹, Yutao Xing¹, Y. S. Pereira¹; ¹Universidade Federal Fluminense

PS-I.MS2.69 - Preparation and characterization of Silver doped Titanium Oxide as Catalyst for Water Splitting

Ângela Caroliny Agra Pinto¹, Cauê de Souza Coutinho Nogueira¹, Yutao Xing¹, Dante Ferreira Franceschini Filho¹; ¹Universidade Federal Fluminense

MS3 - Applications of focused ion beam instrumentation to materials

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08

SESSION MS3

15:20 - 17:00 - JUNE ALMEIDA

Chair: Yutao Xing (UFF);

15:20 - MS3.1*

3D Chemical Mapping via P-FIB Tomography and Machine Learning

Paul Kotula¹, Andrew T. Polonsky¹, Alexandre R-H Bordas¹, Daniel Perry¹, Damion Cummings¹, Julia I Deitz¹, Timothy J. Ruggles¹, John Williard¹, Dustin Ellis¹; ¹Sandia National Laboratories

15:50 - MS3.2*

Application of FIB in physics and materials science: superconductivity in Ni-Bi and 3D reconstruction in Al alloy

Yutao Xing¹; ¹Universidade Federal Fluminense

16:20 - MS3.3*

Application of focused ion beams for the characterization of Earth's minerals and rocks

Rodrigo Prioli Menezes¹; ¹Pontifícia Universidade Católica do Rio de Janeiro

MS4 - 4D-STEM

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08**SESSION MS4****15:20 - 17:00 - HERTHA MEYER**

Chairs: Carlos Alberto Ospina Ramirez (CNPEM); Roberto dos Reis (NORTHWESTERN);

15:20 - MS4.1***Probing Quantum Materials with Electrons**

Kayla Nguyen¹; ¹University of Oregon

15:50 - MS4.2***Phase Diversity in Ptychographic Reconstructions**

Stephanie Ribet¹; ¹Lawrence Berkeley National Laboratory

16:20 - MS4.3***Structural Insights into Organic Thin Films and Solar Cells: from Nano-morphology to Nano-crystallites Structural Evolution**

Mingjian Wu¹; ¹CENEM

POSTER PRESENTATIONS**WEDNESDAY, NOVEMBER 08****SESSION PS-I****17:30 - 18:30 - Exhibition Area****PS-I.MS4.70 - Live Data Processing of 4D STEM Experiments**

Alexander Clausen¹, Dieter Weber¹, Daniel G. Stroppa², Elisabeth Mueller³, Emiliya Poghosyan³,

Rafal E. Dunin-Borkowski¹; ¹Ernst Ruska-Centre, Forschungszentrum Juelich, ²DECTRIS, ³Paul Scherrer Institute

PS-I.MS4.71 - Automatic Identification of Structural Characteristics of Nanostars by Machine Learning Processing of 4D-STEM Data Based on Precession Electron Diffraction

Leonardo Marcon Corrêa¹, Simon Fairclough², Caterina Ducati², Kaleigh Scher³, Supriya Atta⁴, Laura Fabris⁵, Daniel Ugarte¹; ¹Universidade Estadual de Campinas, ²University of Cambridge, ³Rutgers University, ⁴Duke University, ⁵Politecnico di Torino

MS5 - Microscopy in: Metallurgy and Mineralogy/Ceramics, metals, and minerals/Biomaterials

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION MS5

10:20 - 12:00 - GERTRUDE REMPFER

Chairs: Maria Josefina Arellano-Jimenez (UTD); Paula Mendes Jardim (UFRJ); Marin van Heel (CNPEM);

10:20 - MS5.1*

Visualizing fundamental processes in ceramics at the atomic scale

Edson Roberto Leite¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

10:45 - MS5.2

Characterization of Reinforced FeMnAlC Steel by In-situ TiB₂ Formation

Andre Luiz Vidilli¹, Francisco Gil Coury¹, Vicente Amigó Borrás², Lucas Barcelos Otani¹, Claudemiro Bolfarini¹; ¹Univerdade Federal de São Carlos, ²Universidad Politécnic de Valencia

11:00 - MS5.3

Analysis of the crack path occurred by fatigue through the optical microscopy technique with the use of polarized light.

Wendel Leme Beil¹, Eugenio José Zoqui²; ¹Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, ²Universidade Estadual de Campinas

11:15 - MS5.4

Colombian Hematite Minerals Reduced in a Controlled Hydrogen Atmosphere

Martín Mendoza¹, Guillermo Solórzano-Naranjo^{2,3}, Mauricio Muñoz¹, Jhonathan Diaz Baquiro¹, Juan Carlos Garavito¹; ¹Universidad Pedagógica y Tecnológica de Colombia, ²Harvard University, ³Pontifícia Universidade Católica do Rio de Janeiro

11:30 - MS5.5

Microstructural Evaluation and Mechanical Behavior in Al-4Mg (AA5083) Naval Alloy Submitted to Self-Healing by Electric Pulses

Mauricio Mhirdau Peres¹, Maria Monique de Brito Leite¹, Nicolau Apoena Castro¹, Sérgio

Rodrigues Barra¹, Rubens Maribondo do Nascimento¹; ¹Universidade Federal do Rio Grande do Norte

11:45 - MS5.6

Advanced STEM Spectroscopy Characterization down to Atomic Scale and Nanoscale Orientation of Phases in Mg-based and Beta Ti Alloys

Conrado Ramos Moreira Afonso¹, Rubens Caram², Walter José Botta Filho³; ¹Universidade Federal de São Carlos - Campus São Carlos, ²Universidade estadual de Campinas, ³Univerdade Federal de São Carlos

POSTER PRESENTATIONS

THURSDAY , NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.MS5.48 - Influence of microstructural features on the growth of anodic self-organized TiO₂ nanotubes layer on Ti-10Mo-3Sn alloys

Guilherme Domingues Bueno¹, Isabela Vinha Alves¹, Mariana Gerardi Mello¹, Alessandra Cremasco¹; ¹Universidade estadual de Campinas

PS-II.MS5.49 - Microstructural Characterization of β Ti-23.6Nb-5.1Mo-6.7Al Alloy with Low Young's Modulus for Biomedical Applications

Aline Raquel Vieira Nunes¹, Sinara Borborema², Jean Dille³, Leonardo Sales Araujo¹, Luiz Henrique de Almeida¹; ¹Universidade Federal do Rio de Janeiro, ²Universidade do Estado do Rio de Janeiro, ³Université Libre de Bruxelles

PS-II.MS5.50 - Wear-resistant Boron-modified Superferritic Stainless Steel

Brenda Juliet Martins Freitas^{1,2}, Guilherme Yuuki Koga¹, Ana Claudia Moretti Vieira¹, Walter José Botta Filho¹, Sergio de Traglia Amancio-Filho², Claudemiro Bolfarini¹; ¹Univerdade Federal de São Carlos, ²Graz University of Technology

PS-II.MS5.51 - Nanotopographic Modifications by Bioactives Coatings on Titanium Implants to Improve Osseointegration

Audrey Nunes de Andrade¹, Luzia R. Lisbôa Santos¹, Jaqueline Rodrigues Da Silva¹, Almerinda Agrelli¹, Giovanna Machado¹; ¹Centro de tecnologias estratégicas do Nordeste

PS-II.MS5.52 - Grain Refinement in Additively Manufactured Superferritic Stainless Steel

Brenda Juliet Martins Freitas^{1,2}, Guilherme Yuuki Koga¹, Walter José Botta Filho¹, Sergio de Traglia

Amancio-Filho², Claudemiro Bolfarini¹; ¹Univerdade Federal de São Carlos, ²Graz University of Technology

PS-II.MS5.53 - Development and characterization of the microstructure of zirconia-alumina based ceramic composites, reinforced with rare earth oxide yttria, for application in exhaust system of gas turbines of the aerospace sector

Bruna Amorim Lima Advincula da Rocha¹, Antonio Matheus Gomes Soares¹, Filipe Eliakine Patrício dos Santos¹, Yogendra Prasad Yadava¹; ¹Universidade Federal de Pernambuco

PS-II.MS5.54 - Electron backscattered diffraction was applied to the evaluation of the plasticity evolution of martensitic structures.

Pedro Paulo Nunes Maia¹, Émerson Mendonça Miná¹, Giovani Dalpiaz², Ricardo Reppold Marinho², Marcelo T.P. Paes², Marcelo Ferreira Motta¹, Hélio Cordeiro de Miranda¹, Cleiton Carvalho Silva¹; ¹Universidade Federal do Ceará, ²PETROLEO BRASILEIRO SA

PS-II.MS5.55 - The Growth of Hematite in Magnetite Grains with Distinct Genesis: Study of their Topotaxial Relationships Using the EBSD Technique

Flávia Braga de Oliveira¹, Dalila dos Santos Matta¹, Gilberto Álvares da Silva¹, Leonardo Martins Graça¹; ¹Universidade Federal de Ouro Preto

PS-II.MS5.56 - Morphological and structural study of Ag nanoparticles synthed by an ecologically correct route assisted by tapioca.

Henrique Duarte da Fonseca Filho¹, Cindel Cavalcante de Souza¹, Glenda Quaresma Ramos², Fidel Guerrero Zayas¹, Yutao Xing³; ¹Universidade Federal do Amazonas, ²Universidade do Estado do Amazonas, ³Universidade Federal Fluminense

PS-II.MS5.57 - Evaluation of Hemocompatibility of Cold Atmospheric Plasma-Treated Surfaces for Implant Production

Guilherme Ramon Vieira da Silva¹, Gabriel de Moura Martins², Jussier de Oliveira Vitoriano², Bruno Caio Chaves Fernandes¹, Michelly Fernandes De Macedo¹, Clodomiro Alves Junior¹, Moacir Franco de Oliveira¹, Carlos Eduardo Bezerra de Moura¹; ¹Universidade Federal Rural do Semi-Árido, ²Universidade Federal do Rio Grande do Norte

PS-II.MS5.58 - Nanoscale surface dynamics of spatial patterns of polymeric bilayered particles loaded with essential oil

Henrique Duarte da Fonseca Filho¹, Ítalo Carvalho da Costa¹, Edgar Aparecido Sanches¹; ¹Universidade Federal do Amazonas

PS-II.MS5.59 - Wear Resistance of Ceramic Coating Evaluated by Scanning Electron Microscopy

Juliana Carvalho da Silva Araujo¹, Yogendra Prasad Yadava¹; ¹Universidade Federal de Pernambuco

PS-II.MS5.60 - A microstructural study of a chrysoberyl/emerald sample

Breno Barbosa Moreira¹, José Coelho Neto², Karla Balzuweit¹; ¹Universidade Federal de Minas Gerais, ²Instituto de Criminalística da Polícia Civil do Estado de Minas Gerais

PS-II.MS5.61 - The synthetic pathway of whitlockite nanoparticles elucidated by transmission electron microscopy

Laila Maximiano Veras¹, Luelc Souza da Costa², Pierre Basilo Almeida Fechine³, Alan Silva de Menezes⁴, Davino Machado Andrade Neto¹; ¹Instituto Federal de Educação, Ciência e Tecnologia do Ceará, ²Centro Nacional de Pesquisa em Energia e Materiais, ³Universidade Federal do Ceará, ⁴Universidade Federal do Maranhão

PS-II.MS5.62 - Simultaneous Formation of Titania Nanotubes with Bone-Like Apatite and Cerium Electrodeposition for Titanium Metallic Biomimicry

Luzia Rejane Lisbôa Santos¹, Victor Hugo Fideles Camurça^{2,1}, Cícero Inácio da Silva Filho¹, Jaqueline Rodrigues Da Silva¹, Giovanna Machado^{2,1}; ¹Centro de tecnologias estratégicas do Nordeste, ²Universidade Federal de Pernambuco

PS-II.MS5.63 - COMPARATIVE PHYSICO-CHEMICAL CHARACTERIZATION OF XENOGRAFTS USED IN DENTISTRY

Marcos Alexandre Nunes da Silva¹, Monica Diuana Calasans-Maia², Debora Ferreira Barreto Vieira³, Jose Mauro Granjeiro⁴; ¹Fundação Oswaldo Cruz, ²Universidade Federal Fluminense, ³Instituto Oswaldo Cruz - Fiocruz, ⁴Instituto Nacional de Metrologia, Qualidade e Tecnologia

PS-II.MS5.64 - SEM as a key tool to investigate the genesis of granitic rocks

Maria Carolina Rodrigues Marcussi¹, Alice Mendes dos Santos¹, Cristiane Paula de Castro Gonçalves¹, Leonardo Eustáquio da Silva Gonçalves¹; ¹Universidade Federal de Ouro Preto

PS-II.MS5.65 - Synthesis and Characterization of PLA-coated Calcium Carbonate Particles as Carriers For Drug Delivery

Raquel Pires Gonçalves¹, Fernanda Costa de Medeiros¹, Andre Linhares Rossi¹; ¹Centro Brasileiro de Pesquisas Físicas

PS-II.MS5.66 - SEM Investigation of a Vena Cava Filter After Application

Suzana Bottega Peripolli¹, Thays de Almeida Marinho Farzat¹, Kellen Venancio dos Santos¹, Camila Alves pelicarto da silva¹, Letícia dos Santos Aguilera², José Brant Campos¹, Eustáquio De Souza Baêta Júnior¹; ¹Universidade do Estado do Rio de Janeiro, ²Instituto Politécnico da Universidade do Estado do Rio de Janeiro

PS-II.MS5.67 - Intelligent starch-based films with anthocyanin

Thalita Ferreira Menegassi de Souza¹, Sofia Salviano Cota¹, Ana Clara de Freitas Souza¹, Renan Ferreira Menegassi de Souza²; ¹Instituto Federal de Educação, Ciência e Tecnologia do Sul de Minas Gerais, ²Universidade Federal do ABC

PS-II.MS5.68 - Detection of atomic ordering by microscopy and X-Ray Synchrotron diffraction techniques

Vinícius Pereira Bacurau^{1,2}, Eric Marchezini Mazzer^{1,2}, Angelo Fernandes Andreoli¹, Francisco Gil Coury^{1,2}; ¹Universidade Federal de São Carlos - Campus São Carlos, ²Programa de pós-graduação em Ciência e Engenharia de Materiais

MS6 - In-situ Microscopy

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION MS6

10:20 - 12:00 - JUNE ALMEIDA

Chair: Paul Kotula (SANDIA NATIONAL LABS);

10:20 - MS6.1*

Live Visualization of the Nucleation and Growth of Calcium Phosphate and Carbonate Crystals in Solution by In Situ TEM

Andre Linhares Rossi¹; ¹Centro Brasileiro de Pesquisas Físicas

10:50 - MS6.2*

Visualization of the Final Stage of Sintering in Nanoceramics with Atomic Resolution

Jefferson Bettini¹, Tanna E. R. Fiuza¹, Marlon Muniz da Silva¹, Edson Roberto Leite¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

11:20 - MS6.3

In Situ Experiments in Scanning Electron Microscopy: The Potential and Challenges at LNNano.

Fabiano Emmanuel Montoro¹, João Marcos da Silva¹, Elcio Liberato Pires¹; ¹Centro Nacional de Pesquisa em Energia e Materiais

11:35 - MS6.4

Stability and Rupture of an Ultrathin Ionic Wire

Jefferson Bettini¹, Bruno Focassio¹, Tanna E. R. Fiuza¹, Gabriel Ravanhani Schleder¹, Murillo Henrique de Matos Rodrigues¹, João Batista Souza Junior¹, Edson Roberto Leite¹, Adalberto Fazzio¹, Rodrigo Barbosa Capaz^{2,1}; ¹Centro Nacional de Pesquisa em Energia e Materiais, ²Universidade Federal do Rio de Janeiro

POSTER PRESENTATIONS

THURSDAY , NOVEMBER 09

SESSION PS-II

17:30 - 18:30 - Exhibition Area

PS-II.MS6.69 - Environmental Scanning Electron Microscopy for In-Situ Investigation of Perovskite Film Degradation

Hugo Campos Loureiro¹, Paulo Ernesto Marchezi², Ana Flávia Nogueira¹; ¹Universidade Estadual de Campinas, ²University of California San Diego

PS-II.MS6.70 - ORAL SQUAMOUS CELL CARCINOMA: ULTRASTRUCTURAL ANALYSIS OF THE CELL TUMOR AND MICROENVIRONMENT

Marcos Alexandre Nunes da Silva¹, Adriana Terezinha Neves Novellino², Ana Flávia Schueler de Assumpção Leite², Luisa Aguirre Buexm², Josiane Costa Rodrigues de Sá², Simone de Queiroz Lourenço², Debora Ferreira Barreto Vieira¹; ¹Instituto Oswaldo Cruz - Fiocruz, ²Universidade Federal Fluminense

MS7 - Radiation effects in materials

ORAL PRESENTATIONS

* Invited Lecture

THURSDAY , NOVEMBER 09

SESSION MS7

15:20 - 17:00 - JUNE ALMEIDA

Chair: Mary Grace Burke (INL);

15:20 - **MS7.1***

Unlocking the 3-dimensional World of Irradiated Materials Through Automated TEM

Matt Olszta¹; ¹Pacific Northwest National Laboratory

15:50 - **MS7.2***

Nanosopic thermodynamics via electron irradiation: an approach to determine physical properties of low dimensional solids

Paulo F. P. Fichtner¹; ¹Universidade Federal do Rio Grande do Sul

16:20 - **MS7.3**

Changes in the Structure and Performance of Halide-Perovskite Films Exposed to Ionizing Radiation

Maria Josefina Arellano-Jimenez¹, Leunam Fernandez-Izquierdo¹, Zhiyang Qin¹, Manuel A Quevedo-Lopez¹; ¹The University of Texas at Dallas

POSTER PRESENTATIONS

FRIDAY , NOVEMBER 10**SESSION PS-III****17:30 - 18:30 - Exhibition Area**

PS-III.MS7.68 - Understanding the Effects of Beam Damage in TiO₂ Nanoparticles by STEM
Beatriz Rodrigues Canabarro¹, Taissa Zangerolami Lopes Rodrigues¹, Emanuel Pessanha², Bojan A. Marinkovic², Paula Mendes Jardim¹; ¹Universidade Federal do Rio de Janeiro, ²Pontifícia Universidade Católica do Rio de Janeiro

TL - Technical lecture

ORAL PRESENTATIONS

* Invited Lecture

WEDNESDAY, NOVEMBER 08**SESSION TL-1****12:00 - 12:15 - JUNE ALMEIDA****12:00 - TL-1.1**

Transform your SEM to a Volume SEM One Slice at a Time with In-situ Microtome
Donna Jane Gosselin¹; ¹JEOL BRASIL INSTRUMENTOS CIENTIFICOS LTDA

SESSION TL-2**12:15 - 12:30 - JUNE ALMEIDA****12:15 - TL-2.1**

Tescan Electron Microscopy: Exploring Innovations and advancing in the correlation of different techniques

Daniel Richter¹; ¹Tescan do Brasil

SESSION TL-3

17:00 - 17:15 - JUNE ALMEIDA

17:00 - TL-3.1

AI-Empowered Tissue Image Cytometry!

Rupert Ecker¹; ¹Tissuegnostics

SESSION TL-4

17:15 - 17:30 - JUNE ALMEIDA

17:15 - TL-4.1

Microscopia 3D de Raios X aplicada à biociências

Joerg Lindenau¹; ¹Carl Zeiss

THURSDAY , NOVEMBER 09

SESSION TL-5

12:00 - 12:15 - JUNE ALMEIDA

12:00 - TL-5.1

Quantitative image-based cytometry: eyes on the dots!

Nicolas Hoch¹; ¹Universidade de São Paulo

SESSION TL-6

12:15 - 12:30 - JUNE ALMEIDA

12:15 - TL-6.1

Innovation and Automation on Plasma Ion Beam

Rick Passey¹; ¹Thermo Fisher Scientific

SESSION TL-7

17:00 - 17:15 - JUNE ALMEIDA

17:00 - TL-7.1

Novel Solutions in SEM Imaging and Microanalysis for Advancing Materials Research

Jennifer Misuraca¹; ¹JEOL BRASIL INSTRUMENTOS CIENTIFICOS LTDA

SESSION TL-8

17:15 - 17:30 - JUNE ALMEIDA

17:15 - TL-8.1

Tescan Electron Microscopy: Exploring Innovations and advancing in the correlation of different techniques

Daniel Richter¹; ¹Tescan do Brasil

FRIDAY , NOVEMBER 10

SESSION TL-9

12:00 - 12:15 - JUNE ALMEIDA

12:00 - TL-9.1

SEM-EDS revolution with ChemiSEM technology

Rick Passey¹; ¹Thermo Fisher Scientific

SESSION TL-10

12:15 - 12:30 - JUNE ALMEIDA

12:15 - TL-10.1

Introducing BEX Technology

Hector Olivares¹; ¹Oxford Instruments

SESSION TL-11

17:00 - 17:15 - JUNE ALMEIDA

17:00 - TL-11.1

From large volume to high resolution – Update on Zeiss Volume EM imaging solutions - Part 2

Joerg Lindenau¹; ¹Carl Zeiss

SESSION TL-12

17:15 - 17:30 - JUNE ALMEIDA

17:15 - TL-12.1

Advancing microscopy image analysis workflows using machine-learning techniques

Tomas Silva Santisteban¹; ¹Oxford Instruments

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Stephanie Silva Jaureguiberry	PS-I.LSS2.38	Tânia Ueda Nakamura	PS-III.LSS10.38, PS-III.LSS8.52, PS- III.LSS9.61
Suélia Siqueira Rodrigues Fleury Rosa	PS-II.LSS7.44	Tanna E. R. Fiuza	MS2.4, MS6.2, MS6.4
Sueli de Oliveira Silva	PS-III.LSS10.38, PS-III.LSS8.52	Tárcio do Santos Cabral	PS-III.GMS4.12
Supriya Atta	PS-I.MS4.71	Tarcísio Micheli Perfecto	PS-I.MS1.62
Susana Frases	PS-III.LSS9.60	Tatiana Galvão de Melo de Oliveira	LSS9.4
Suzana Bottega Peripolli	PS-II.MS5.66, PS- III.GMS4.10	Teresa Hungria	GMS3.2
Sven Klumpe	LSS3.2	Thaissa Zangerolam L. Rodrigues	GMS2.3
Sylvie Schamm -Chardon	GMS3.2	Thaiza Ferreira Menegassi de Souza	PS-I.LSS1.6
		Thales Augusto Vicentini	PS-II.LSS5.32
T		Thalita Dias Pinheiro Caldas	GMS3.4
Tadeu Ériton Caliman Zanardo	PS-II.LSS7.37	Thalita Ferreira Menegassi de Souza	PS-II.MS5.67
Taíssa Barcelos Casanova da Silva	PS-III.LSS8.50	Thalya Soares Ribeiro Nogueira	PS-III.LSS8.49
Taíssa Rêgo Menezes	GMS3.5	Thayane Ferreira Fernandes	PS-III.GMS3.4
Taissa Zangerolami Lopes Rodrigues	PS-III.MS7.68	Thays de Almeida Marinho Farzat	PS-II.MS5.66
Talita Pantoja Ribeiro	PS-III.LSS10.42, PS-III.LSS10.43, PS-III.LSS9.53	Thiago André Salgueiro Soares	PS-I.MS1.63, PS- III.GMS5.32
Tamara Kobiec	PS-I.LSS2.18	Thiago Mattar Cunha	LSS9.2, PS- II.LSS7.47
Tania Campos Ordoñez	PS-I.LSS2.39	Thiago Moreno Souza	LSS7.3

Timothy J. Ruggles MS3.1

Tomas Silva Santisteban TL-12.1

Tom Flint GMS2.1

Tuanne dos Santos Melo PS-III.LSS9.67

U

Ueslen Rocha Silva PS-II.LSS7.36

V

Valdiléa Gonçalves Veloso LSS7.3

Valdirene Moreira Gomes PS-II.LSS5.24

Valéria Wanderley Teixeira PS-III.GMS3.1, PS-III.GMS3.2

Vanessa Natalia de Lima PS-I.MS1.64

Vanessa Pimentel Lages GMS4.3, GMS5.4

Vicente Amigó Borrás MS5.2

Victor Carlos Mello GMS5.6, PS-I.LSS2.35, PS-I.MS1.52, PS-I.MS1.57, PS-I.MS1.65, PS-II.LSS7.43, PS-III.GMS4.17, PS-III.GMS5.27

Victor do Valle Pereira Midlej LSS9.4, PS-III.GMS4.20

Victor Hugo Fideles Camurça PS-II.MS5.62

Victor Lira Chastinet PS-III.GMS4.14

Victor Ramón Martínez Zelaya LSS3.5

Vidal de Freitas Mansano PS-II.LSS5.30

Viktor Oswaldo Cardenas Concha PS-II.GMS2.7

Vinícius Fortes Carvalho PS-I.MS1.62

Vinícius Pereira Bacurau PS-II.MS5.68

Vítor Alves Pessoa PS-III.LSS8.47

Vitor Aníbal do Sacramento Mendes PS-I.MS1.66

Vitor B. Pelegati LSS7.5

Vitoria Maria de Brito PS-I.LSS1.5

Vitória Samara Santana de Melo PS-III.GMS3.1, PS-III.GMS3.6, PS-III.GMS3.7, PS-III.GMS3.8

Vitor Silveira Rolin PS-I.MS1.54

Viviane Gonçalves Leite PS-II.LSS5.30

Vladimir Galdino Sabino PS-II.LSS7.42

W

Walter José Botta Filho GMS2.6, MS5.6, PS-I.MS1.66, PS-II.MS5.50, PS-II.MS5.52

Wanderley De souza LSS10.1, LSS10.2, LSS3.3, LSS3.4, PS-I.LSS3.44, PS-III.LSS10.41, PS-

	III.LSS9.62, PS-III.LSS9.65, PS-III.LSS9.66	Yogendra Prasad Yadava	PS-II.MS5.53, PS-II.MS5.59
Wanderli Pedro Tadei (in memoriam)	PS-II.LSS7.41	Y. S. Pereira	PS-I.MS2.68, PS-III.GMS4.11
Welinton Ribamar Lopes	PS-III.LSS8.48		LSS5.4, PS-I.LSS2.10, PS-I.LSS2.24, PS-I.LSS2.25, PS-I.LSS2.41, PS-I.LSS2.42, PS-I.LSS2.43, PS-I.LSS2.7
Wellington Silva Ferreira	PS-III.GMS4.23	Yuri Wellington Machado Favacho	
Wendel Leme Beil	MS5.3		
Wendell Girard Dias	LSS7.3		
Wesley Ferreira de Moraes Brandão	PS-III.GMS3.9	Yuri Willkens de Oliveira Costa	PS-III.LSS10.45, PS-III.LSS10.46, PS-III.LSS9.55
Wim Maurits Sylvain Degrave	PS-I.LSS1.4		MS3.2, PS-I.MS1.55, PS-I.MS1.67, PS-I.MS2.68, PS-I.MS2.69, PS-II.GMS2.3, PS-II.MS5.56, PS-III.GMS4.11
Wolfgang Baumeister	LSS3.2, PS-III.LSS9.62	Yutao Xing	
Y			
Yadira Gasca Martínez	PS-I.LSS2.39		
Yanne Alves Mendes	LSS5.5, PS-I.LSS2.25, PS-I.LSS2.40, PS-I.LSS2.41, PS-I.LSS2.42, PS-I.LSS2.43, PS-I.LSS2.7, PS-I.LSS2.9		
Yara Reis	LSS1.1		
Yasmin Amadio Coqueiro	PS-II.LSS5.34		
Yngrid Simen	PS-I.MS1.67		

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