

CONFERENCE
PROGRAM



XXXVII INTERNATIONAL
CONFERENCE ON THE APPLICATIONS
OF THE MÖSSBAUER EFFECT

CARTAGENA DE INDIAS
SEPTEMBER 3-8, 2023

SCIENTIFIC PROGRAM

	SUNDAY – 03/09	MONDAY – 04/09	TUESDAY – 05/09
7:30-7:45	Registration: Sunday, Monday and Tuesday (from 8:00 until 17:00)	IBAME MEETING	VIRTUAL POSTERS
7:45-8:00			
8:00-8:15			
8:15-8:30			
8:30-8:45		Opening Ceremony	K2 – Alp
8:45-9:00			
9:00-9:15			
9:15-9:30			
9:30-9:45		K1 – Röhlsberger	C16 – Nagy (Online)
9:45-10:00			C17 – Raghavendra Reddy (Online)
10:00-10:15	C18 - Schlage		
10:15-10:30	COFFE BREAK	COFFE BREAK	
10:30-10:45	T1 – Bocklage	C1 - Manendar (Online)	C19 - Tripathi (Online)
10:45-11:00		C2 - Tolea (Online)	C20 - Stankov
11:00-11:15		C3 - Negi	I4 – Quesada
11:15-11:30	C4 - Okabayashi		
11:30-11:45	T2 –Hermann	I1 - T03_ Šepelák	C21 - Kądziołka-Gaweł
11:45-12:00			C22 – Miziguchi
12:00-12:15	LUNCH	C5 - Panchwanee	C23 – Arias-Contreras
12:15-12:30		C6 – Yaroslavtsev	CONFERENCE PHOTO
12:30-12:45			
12:45-13:00		LUNCH	LUNCH
13:00-14:00			
14:00-14:15	T3 –Pasquevich	I2 – Mantovan	I5 – Gracheva
14:15-14:30		C7 - Velásquez	C24 – Bessas
14:30-14:45	T4 –Reissner	C8 - Krehula	C25 – de la Figuera
14:45-15:00		C9 - Jartych	C26 – Cieslak
15:00-15:15		C10 - Jaén	C27 – Larrea
15:15-15:30			
15:30-15:45	COFFE BREAK	COFFE BREAK	COFFE BREAK
15:45-16:00			
16:00-16:15	T5 –Greneche	I3 – Zamora	I6 – Ramos
16:15-16:30			
16:30-16:45	T6 –Sánchez F.	C11 - Espinoza Suarez	IN-PERSON POSTERS
16:45-17:00		C12 - Mulaba Bafubiandi	
17:00-17:15		C13 - Benítez (Online)	
17:15-17:30		C14 - Kubuki (Online)	
17:30-17:45		C15 - Ibrahim (Online)	
17:45-18:00			
18:00	WELCOME COCKTAIL		
19:00			
20:00			

WEDNESDAY – 06/09	THURSDAY – 07/09	FRIDAY - 08/09
A1 – Seto (Online)	VIRTUAL POSTERS	C41 – Tsutsui (Online)
A2 – Dubiel		C42 – Rahman (Online)
I7 – Wang	IBAME MEETING	C43 – Wang Z. (Online)
C28 - Jakubowska – (Online)		K5 – Shvyd’ko
C29 – Bohra (Online)		C44 – Bartha (Online)
COFFE BREAK	COFFE BREAK	C45 – Prajapat
K3 – Schünemann		I11 – Szumiata (Online)
I8 – Nomura	K4 – Homonnay	COFFE BREAK
C30 - Seewald	C34 – Merkel	C46 – Bera
C31 – Lindén		C47 - Durán
Sponsors and exhibitors	I9 – Vrba	I12 – Contreras Medrano (Online)
LUNCH	LUNCH	C48 - Sadashivaiah (Online)
EXCURSION	I10 – Passamani	C49 – Dubiel
	C35 - Nagasawa	Closing ceremony
	C36 - Alca-Ramos	
	C37 - Renz	
	C38 – Sergeev	
	COFFE BREAK	
	C39 - Sanchez E	
	C40 – Martínez-Sánchez	
	IN-PERSON POSTERS	
	SOCIAL PROGRAM	

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- Marcel Miglierini, Slovak University of Technology, Slovakia
- José Francisco Marco, Instituto de Química Física Rocasolano, CSIC, Spain
- Raphael Hermann, Oak Ridge National Laboratory, USA
- Ercan Alp, Argonne National Laboratory, USA
- Virender K. Sharma, Texas A & M University, USA

EXHIBITORS

Universidad de Antioquia

Iron Analytics

RITVERC JSC

TOPICS

T01: Magnetism and solid-state physics

T02: Chemistry

T03: Nanostructures and thin films

T04: Materials science and industrial applications

T05: Biological and medical applications

T06: Earth sciences, mineralogy, cultural heritage and environmental sciences

T07: Lattice dynamics and vibrational properties

T08: Experimental techniques, methodology and coherent phenomena

CONFERENCE PROCEEDINGS

The conference proceedings will be published in the journal *Hyperfine Interactions* (published by Springer Nature). All lecturers (tutorial, keynote, awarded, invited, contributed) and poster presentations can be included in the conference proceedings. You are welcome to submit your manuscripts till 4th September. Papers have to be submitted via the *Hyperfine Interactions* website (<https://www.springer.com/journal/10751>) by clicking on the button “submit manuscript”. Under the Details tab, the authors should choose the name of the conference from the drop-down list (ICAME 2023).

USEFUL INFORMATION

Guide to Cartagena

Prior to your travel, we strongly advise acquainting yourself with comprehensive information about Cartagena. This includes details about tourism, the airport, transportation options, exchange rate, security measures, migration and more. Being well-informed will enhance your travel experience and ensure a smooth journey. Please visit the following web pages: <https://aeropuertocartagena.com.co/>; <https://colombia.travel/en>; <https://apps.migracioncolombia.gov.co/pre-registro/en>. For additional information on Cartagena, please also enter to “The Venue” tab at the conference web page. The official currency of Colombia is the Colombian Peso (COP). To get an estimate of up-to-date currency exchange rates, you can use reliable

currency converters like: <https://www.oanda.com/currency-converter/>; <https://www.xe.com/es/currencyconverter/>; <https://www.x-rates.com/>; or others you trust.

The conference venue

The conference venue is in the “Arcos” lecture hall at the Hotel Caribe by Faranda Grand, Cra 1 # 2 – 87, Cartagena de Indias, and approx. 4.5 km from the historic city center and approx. 8.8 km from Rafael Nuñez Airport. See the map at: <https://goo.gl/maps/t7zrkfegucSRf7zE6>. The lecture hall and its surroundings will be available for the welcome reception, the posters, coffee breaks and discussions of the participants. Information about the conference dinner will be posted at the conference web page.

Registration & Info Desk

Location: surroundings of the “Arcos” lecture hall. Opening hours: from Sunday 03th till Thursday 06th September, 8:00 – 17:00; and Friday 08th September, 8:00 – 11:00. All the time is Colombian Local Time (CLT).

Instructions for presenters

The conference will be held in a hybrid format. All lectures (tutorial, keynote, awarded, invited, contributed) will be transferred via Zoom platforms. All the speakers (participating physically) will be requested to provide their presentations in PPT or PDF format in advance to each session. The presentation will be downloaded on a local computer in the lecture hall. At the end of each session, the files will be deleted from the computer. The running presentation (either local or online) will be projected on the screen in the lecture hall. The computer screen will be at the same time shared via the Zoom platform to all registered and confirmed participants. Invitations and links to the Zoom platform will be daily sent by e-mail (to the address provided during registration) to each confirmed participant.

Duration of lectures:

Tutorial lecture 35 minutes + 10 minutes discussion

Keynote lecture 35 minutes + 10 minutes discussion

Awarded lecture 35 minutes + 10 minutes discussion

Invited lecture 25 minutes + 5 minutes discussion

Contributed lecture 12 minutes + 3 minutes discussion

Posters

All the registered posters (from in-person as well as online participants), submitted in pdf format, will be uploaded to a folder in Google Drive and shared via e-mail (only) to all confirmed participants of the conference. In-person presenters will be asked to anchor their posters on the tables in the lecture hall the first day of the conference. The recommended (and maximum) size of posters is A0 (w 841mm x h 1189mm). The in-person poster section will be held on Tuesday, 05/09, and on Thursday, 07/09, since 16:30 till 18:00 (CLT) in the lecture hall. On Tuesday, 05/09, and on Thursday, 07/09, since 7:30 till 8:30 (CLT), the online poster session will be held by using the Zoom platform with the breakout rooms. The presenters are asked to enter the respective room with the number corresponding to the number of her/his poster. Then, it is necessary to share a file with your poster (similarly as in case of a lecture). The presenters are encouraged to be available at her/his room since 7:30 till 8:30 (CLT) for discussions with participants. All essential information about the conference including the scientific program can be found at the conference web page.

XXXVII INTERNATIONAL CONFERENCE ON THE APPLICATIONS OF THE MÖSSBAUER EFFECT, ICAME 2023

Cartagena de Indias, September 03-08

CONFERENCE PROGRAM

Conference location: “Arcos” lecture hall, Hotel Caribe by Faranda, Cra 1 # 2-87.
Cartagena de Indias. Colombia

SUNDAY 03/09/2023

8:00 – 17:00. Registration.

Sunday Tutorials Session 1 (10:30 – 12:00). **Chair: S.M. DUBIEL.** AGH University of Science and Technology (Poland)

10:30 – 11:15. T1. **Lars BOCKLAGE.** Deutsches Elektronen-Synchrotron DESY (Germany). “EVALUATION OF MÖSSBAUER DATA WITH THE SOFTWARE PACKAGE NEXUS.”

11:15 – 12:00. T2. **Raphaël P. HERMANN.** Oak Ridge National Laboratory (USA). “COMBINING INELASTIC NEUTRON SCATTERING, NUCLEAR RESONANCE SCATTERING, AND MÖSSBAUER SPECTROSCOPY.”

12:00 – 14:00. Lunch

Sunday Tutorials Session 2 (14:00 – 15:30). **Chair: K. SCHLAGE.** Deutsches Elektronen-Synchrotron DESY (Germany)

14:00 – 14:45. T3. **Gustavo A. PASQUEVICH.** Universidad Nacional de La Plata (Argentina). “METHODOLOGY AND APPLICATIONS OF THE CONSTANT VELOCITY MODE IN MÖSSBAUER SPECTROMETRY.”

14:45 – 15:30. T4. **Michael REISSNER.** Technische Universität Wien (Austria). “MÖSSBAUER SPECTROSCOPY IN EXTERNAL MAGNETIC FIELDS.”

15:30 – 16:00. Coffee break.

Sunday Tutorials Session 3 (16:00 – 17:30). **Chair: J. OKABAYASHI.** The University of Tokyo (Japan).

16:00 – 16:45. T5. **Jean Marc GRENECHE.** Le Mans Université (France). “ON THE STUDY OF ARTIFICIAL AND NATURAL MAGNETIC NANOSTRUCTURES BY MÖSSBAUER SPECTROMETRY.”

16:45 – 17:30. T6. **Francisco H. SÁNCHEZ.** Universidad Nacional de La Plata (Argentina). “RETRIEVAL OF KEY STRUCTURAL INFORMATION THROUGH STANDARD MÖSSBAUER SPECTROMETRY ON ^{57}Fe .”

18:00 – 20:00. Welcome cocktail.

MONDAY 04/09/2023

8:00 – 17:00. Registration.

7:30 – 9:00. IBAME MEETING (For IBAME Members only). **Chair: R. RÖHLSBERGER.** Chair of IBAME.

Monday Morning Session 1 (9:00 – 10:00). **Chair: A.A. Velásquez.** Universidad EAFIT (Colombia)

9:00 – 9:15. Opening ceremony.

John J. ARBOLEDA. Rector of Universidad de Antioquia (Colombia).

R. RÖHLSBERGER. Chair of the International Board on the Applications of the Mössbauer Effect (IBAME)

C.A. BARRERO MENESES. IBAME representative of Colombia and Chair of ICAME-2023

9:15 – 10:00. K1. Ralf RÖHLSBERGER. Deutsches Elektronen-Synchrotron DESY (Germany). “ENTERING NEW REGIMES IN NUCLEAR RESONANT SCATTERING: FROM SYNCHROTRONS TO X-RAY LASERS AND BEYOND.”

10:00 – 10:30. Coffee break.

Monday Morning Session 2 (10:30 – 11:30). **Chair: E.C. PASSAMANI.** Universidade Federal do Espírito Santo (Brazil).

10:30 – 10:45. C1. Mani MANENDAR. Osmania University (India). “⁵⁷Fe MOSSBAUER STUDY OF Mg DOPED Y-TYPE $\text{Ba}_{0.5}\text{Sr}_{1.5}\text{Co}_2\text{Fe}_{12}\text{O}_{22}$ HEXAFERRITES.”

10:45 – 11:00. C2. Felicia ŢOLEA. National Institute of Materials Physics (Romania). “LOCAL ATOMIC CONFIGURATIONS AND MAGNETIC ORDER IN Cu DOPPED Ni-Fe-Ga MAGNETOFUNCTIONAL INTERMETALLICS.”

11:00 – 11:15. C3. Ankita NEGI. Deutsches Elektronen-Synchrotron DESY (Germany). “PTYCHOGRAPHY FOR NUCLEAR RESONANT SCATTERING.”

11:15 – 11:30. C4. Jun OKABAYASHI. The University of Tokyo (Japan). “OPERANDO MÖSSBAUER SPECTROSCOPY IN THE MULTI-FERROIC SYSTEM.”

Monday Morning Session 3 (11:30 – 12:30). **Chair: L. BOCKLAGE.** Deutsches Elektronen-Synchrotron DESY (Germany).

11:30 – 12:00. I1. Vladimír ŠEPELÁK. Karlsruhe Institute of Technology (Germany). “LOCAL STRUCTURAL DISORDER – MAGNETISM RELATIONSHIPS IN NANOSTRUCTURED NONEQUILIBRIUM COMPLEX OXIDES.”

12:00 – 12:15. C5. Anjali PANCHWANEE. Deutsches Elektronen-Synchrotron DESY (Germany). “MAGNETIC SPIRAL STRUCTURE DETECTION VIA NUCLEAR FORWARD SCATTERING OF SYNCHROTRON RADIATION.”

12:15 – 12:30. C6. **Sergey YAROSLAVTSEV.** European Synchrotron Radiation Facility (France). “SYNCmoss: THE FITTING SOFTWARE FOR SYNCHROTRON MÖSSBAUER SOURCE.”

12:30 – 14:00. Lunch

Monday Afternoon Session 1 (14:00 – 15:30). **Chair: J. WANG.** Dalian Institute of Chemical Physics, Chinese Academy of Sciences (China).

14:00 – 14:30. I2. **Roberto MANTOVAN.** CNR-IMM, Unit of Agrate Brianza (Italy). “TARGETING SPIN-CHARGE CONVERSION IN LARGE-AREA TOPOLOGICAL INSULATORS GROWN ON SILICON WITH THE HELP OF MÖSSBAUER SPECTROSCOPY.”

14:30 – 14:45. C7. **Álvaro A. VELÁSQUEZ.** Universidad EAFIT (Colombia). “EVALUATION OF MORPHOLOGICAL PARAMETERS OF MAIZE AND CHILI PEPPER PLANTS TREATED WITH IRON OXIDE NANOPARTICLES.”

14:45 – 15:00. C8. **Stjepko KREHULA.** Ruđer Bošković Institute (Croatia). “THE INFLUENCE OF ALUMINIUM IONS ON THE HYDROTHERMAL FORMATION AND PROPERTIES OF HEMATITE NANORODS.”

15:00 – 15:15. C9. **Elżbieta JARTYCH.** Lublin University of Technology (Poland). “MÖSSBAUER SPECTROSCOPY STUDIES OF Fe-BASED HEUSLER ALLOYS PREPARED BY MECHANICAL ALLOYING.”

15:15 – 15:30. C10. **Juan A. JAÉN.** Universidad de Panamá (Panama). “STRUCTURAL AND ELECTROCHEMICAL CHARACTERIZATION OF TETRAGONAL COPPER FERRITE NANOPARTICLES.”

15:30 – 16:00. Coffee break.

Monday Afternoon Session 2 (16:00 – 17:00). **Chair: J.M. GRENECHE.** Le Mans Université (France).

16:00 – 16:30. I3. **Ligia E. ZAMORA.** Universidad del Valle (Colombia). “MÖSSBAUER SPECTROSCOPY APPLIED TO THE STUDY OF Nd-Ce-Fe BASED 1:12 PERMANENT MAGNETS.”

16:30 – 16:45. C11. **Silvia M. ESPINOZA SUAREZ.** Universidad Nacional Mayor de San Marcos (Peru). “CHARACTERIZATION AND MOSSBAUER SPECTROSCOPY OF SOLID STATE RECYCLED Q235 STEEL FABRICATED BY POWDER METALLURGY.”

16:45 – 17:00. C12. **Antoine F. MULABA - BAFUBIANDI.** University of Johannesburg (South Africa). “MOSSBAUER SPECTROSCOPY OF CHROMITITE AND VANADIUM ORES : ECONOMICS AND MINERAL PROCESSING RISK ASSESSMENT.”

Monday Afternoon Session 3 (17:00 – 17:45). **Chair: J.A. RAMOS-GUIVAR.** Universidad Nacional Mayor de San Marcos (Peru).

17:00 – 17:15. C13. Marisela BENITEZ. Universidad del Valle (Colombia). “SYNTHESIS AND CHARACTERIZATION OF $\text{LaFe}_{11.57-x}\text{Si}_{1.43}\text{Ti}_x$ ALLOYS FOR APPLICATIONS IN MAGNETIC REFRIGERATION.”

17:15 – 17:30. C14. Shiro KUBUKI. Tokyo Metropolitan University (Japan). “PHOTOCATALYTIC AND CATHODE ACTIVE ABILITIES OF NICKEL-SUBSTITUTED GOETHITE NANOPARTICLES CHARACTERIZED BY ^{57}Fe -MÖSSBAUER SPECTROSCOPY.”

17:30 – 17:45. C15. Ahmed IBRAHIM. Tokyo Metropolitan University (Japan). “MÖSSBAUER SPECTROSCOPY OF IRON-OR TIN- SUBSTITUTED VANADATE GLASS AND GLASS-CERAMICS AS A CATHODE MATERIAL ACTIVE IN SIBS.”

TUESDAY 05/09/2023

8:00 – 17:00. Registration.

7:30 – 8:30. VIRTUAL POSTERS. Chairs: Local Organizing Committee

Tuesday Morning Session 1 (8:30 – 10:00). **Chair: V. VRBA.** Palacký University Olomouc (Czech Republic). To be confirmed.

8:30 – 9:15. K2. Esen E. ALP. Argonne National Laboratory (USA). “DIRECTLY FROM ASTEROID RYUGU TO THE HANDS OF MÖSSBAUER SPECTROSCOPISTS.”

9:15 – 9:30. C16. Dénes L. NAGY. Wigner Research Centre for Physics (Hungary). “ANALYSIS OF MAGNETIC RELAXATION IN HEXAKIS(UREA)-IRON(III) COMPLEXES IN FRAMES OF THE AFANASEV–GOROBCHENKO MODEL.”

9:30 – 9:45. C17. Varimalla RAGHAVENDRA REDDY. UGC-DAE Consortium for Scientific Research, University Campus (India). “LOW TEMPERATURE AND HIGH PRESSURE MÖSSBAUER STUDIES ON $\text{Bi}_3\text{FeTi}_3\text{O}_{15}$ AND FeVO_4 MULTIFERROIC MATERIALS.”

9:45 – 10:00. C18. Kai SCHLAGE. Deutsches Elektronen-Synchrotron DESY (Germany). “IMAGING THE SPIN STRUCTURE OF OBLIQUELY DEPOSITED THIN FILMS VIA NUCLEAR FORWARD SCATTERING OF SYNCHROTRON RADIATION.”

10:00 – 10:30. Coffee break.

Tuesday Morning Session 2 (10:30 – 11:30). **Chair: R.P. HERMANN.** Oak Ridge National Laboratory (USA).

10:30 – 10:45. C19. Amita TRIPATHI. Indian Institute of Technology Jodhpur (India). “MÖSSBAUER STUDIES ON CRETACEOUS TERTIARY BOUNDARY (KTB) IN ELLES II SECTION, TUNISIA SAMPLES, UNDERSTANDING MASS EXTINCTION.”

10:45 – 11:00. C20. Svetoslav STANKOV. Karlsruhe Institute of Technology (Germany). “LATTICE DYNAMICS OF ULTRATHIN HIGH-K RARE EARTH SESQUIOXIDE FILMS: THE CASE OF Eu_2O_3 ON YSZ(001).”

11:00 – 11:30. I4. Adrián QUESADA. Instituto de Cerámica y Vidrio, CSIC (Spain). “DEVELOPING NOVEL PERMANENT MAGNETS AND THEIR RECYCLING PROCESSES TO REDUCE OUR DEPENDENCE ON RARE-EARTH ELEMENTS.”

Tuesday Morning Session 3 (11:30 – 12:15). **Chair: S. KREHULA.** Ruđer Bošković Institute (Croatia).

11:30 – 11:45. C21. Mariola KĄDZIOŁKA-GAWĘŁ. University of Silesia (Poland). “IMPACT OF HIGH TEMPERATURES ON CATION DISTRIBUTION IN A STRUCTURE OF ALUMINOCÉLADONITE: A MULTI-ANALYTICAL APPROACH.”

11:45 – 12:00. C22. Masaki MIZUGUCHI. Nagoya University (Japan). “MÖSSBAUER SPECTROSCOPY FOR FERROMAGNETIC NANOPARTICLES.”

12:00 – 12:15. C23. Mayra A. ARIAS-CONTRERAS. Universidad Nacional Mayor de San Marcos (Peru). “ADSORPTION OF DYES WITH IRON OXIDE NANOPARTICLES OBTAINED BY BIOSYNTHESIS WITH *CITRUS RETICULATA* EXTRACT.”

12:15 – 12:30. CONFERENCE PHOTO

12:30 – 14:00. Lunch

Tuesday Afternoon Session 1 (14:00 – 15:30). **Chair: V. SCHÜNEMANN.** University of Kaiserslautern-Landau (Germany).

14:00 – 14:30. I5. Maria GRACHEVA. ELTE Eötvös Loránd University (Hungary). “IRON CITRATE COMPLEXES AT BIOLOGICALLY RELEVANT CONDITIONS.”

14:30 – 14:45. C24. Dimitrios BESSAS. European Synchrotron Radiation Facility (France). “PRESSURE/TEMPERATURE/MAGNETIC FIELD DEPENDENT HYPERFINE INTERACTIONS IN SmFeAsO .”

14:45 – 15:00. C25. Juan de la FIGUERA. Instituto de Química Física “Rocasolano”, CSIC (Spain). “MAGNETIC COUPLING BETWEEN A Co FILM AND A BARIUM HEXAFERRITE FILM.”

15:00 – 15:15. C26. Jakub CIESLAK. AGH University of Science and Technology

(Poland). “(FeCrCoNi)AlxCu_y HIGH ENTROPY ALLOYS: MOSSBAUER MEASUREMENTS AND ELECTRONIC STRUCTURE CALCULATIONS.”

15:15 – 15:30. C27. **Julio A. LARREA JIMÉNEZ.** University of São Paulo (Brazil). “MÖSSBAUER INVESTIGATION OF THE ANTISITE DISORDER IN Fe_xGa_{3-x} CAGE COMPOUND.”

15:30 – 16:00. Coffee break.

Tuesday Afternoon Session 2 (16:00 – 16:30). **Chair: L.E. ZAMORA.** Universidad del Valle (Colombia).

16:00 – 16:30. I6. **Juan A. RAMOS-GUIVAR.** Universidad Nacional Mayor de San Marcos (Peru). “FUNCTIONALIZED NANOMAGNETITE OR NANOMAGHEMITE? DIFFERENTIATING BOTH MAGNETIC PHASES FOR ENVIRONMENTAL AND ECOTOXICOLOGICAL APPLICATIONS.”

16:30 – 18:00. IN-PERSON POSTERS. **Chairs:** J. Piamba. Universidad de Ibagué (Colombia) – L.C. Sánchez. Universidad de Córdoba (Colombia).

WEDNESDAY 06/09/2023

Wednesday Morning Session 1 (7:30 – 9:00). **Chair: Y. GARCÍA.** (Online). Université Catholique de Louvain (Belgium). Vice Chair of IBAME.

7:30 – 8:15. A1. **Makoto SETO.** Kyoto University (Japan). “DEVELOPMENT OF NUCLEAR RESONANT SCATTERING METHODS.”

8:15 – 9:00. A2. **Stanislaw M. DUBIEL.** AGH University of Science and Technology (Poland). “MÖSSBAUER SPECTROSCOPY OF Fe-Cr ALLOYS.”

Wednesday Morning Session 2 (9:00 – 10:00). **Chair: E.E. ALP.** Argonne National Laboratory (USA).

9:00 – 9:30. I7. **Junhu WANG.** Dalian Institute of Chemical Physics, Chinese Academy of Sciences (China). “⁵⁷Fe MÖSSBAUER SPECTROSCOPIC STUDY OF LUNAR SOIL SAMPLES RETURNED BY THE CHANG-5 MISSION.”

9:30 – 9:45. C28. **Martyna JAKUBOWSKA.** Warsaw University of Technology (Poland). “THE INFLUENCE OF SAMPLE THICKNESS ON RESULTS OF MÖSSBAUER SPECTROSCOPY OF ORDINARY CHONDRITES AND THEIR CLASSIFICATION.”

9:45 – 10:00. C29. **Mridula BOHRA.** Indian Institute of Technology Jodhpur (India). “MÖSSBAUER SPECTROSCOPIC STUDY OF GGAAH WELL FOR SHALE GAS/ SHALE OIL FORMATION FROM CAMBAY BASIN.”

10:00 – 10:30. Coffee break.

Wednesday Morning Session 3 (10:30 – 11:45). **Chair: R. MANTOVAN.** CNR-IMM, Unit of Agrate Brianza (Italy).

10:30 – 11:15. K3. Volker SCHÜNEMANN. University of Kaiserslautern-Landau (Germany). “EXPLORATION OF BIOLOGICAL AND CHEMICAL SYSTEMS WITH THE MÖSSBAUER-EFFECT”

11:15 – 11:45. I8. Kiyoshi NOMURA. Tokyo Medical University (Japan). “MÖSSBAUER STUDY ON METAL OXIDES DOPED WITH DILUTE ^{57}Fe UNDER PERMANENT MAGNET FIELDS.”

Wednesday Morning Session 4 (11:45 – 12:30). **Chair: M. REISSNER.** Technische Universität Wien (Austria). To be confirmed.

11:45 – 12:00. C30. Felix SEEWALD. Technische Universität Dresden, IFMP (Germany). “NON-COLLINEAR MAGNETISM AND Fe-R INTERACTION IN $\text{R}_3\text{Fe}_3\text{Sb}_7$.”

12:00 – 12:15. C31. Johan LINDÉN. Åbo Akademi University (Finland). “EXPLORING THE PROPERTIES OF THE METASTABLE Fe_2SeO PHASE USING Fe-57 MÖSSBAUER SPECTROSCOPY.”

12:15 – 12:30. SPONSORS AND EXHIBITORS

12:30 – 14:00. Lunch

14:00 – 18:00. EXCURSION

THURSDAY 07/09/2023

7:30 – 8:30. VIRTUAL POSTERS. Chairs: Local Organizing Committee.

8:30 – 10:00. IBAME MEETING. (For IBAME Members only). **Chair: R. RÖHLSBERGER.** Chair of IBAME.

10:00 – 10:30. Coffee break.

Thursday Morning Session 1 (10:30 – 11:45). **Chair: L. MACHALA.** Palacký University Olomouc (Czech Republic).

10:30 – 10:45. C32. Victor E. KUNCSEER. National Institute of Materials Physics (Romania). “SENSITIVE EVALUATION OF THE DRUG LOADING DEGREE OF Fe OXIDE NANOPARTICLES BY MÖSSBAUER SPECTROSCOPY COUPLED WITH MAGNETOMETRY.”

10:45 – 11:00. C33. Jarmila DEGMOVA. Slovak University of Technology (Slovakia). “MÖSSBAUER SPECTROSCOPY STUDY OF FeCr ALLOY IN EARLY STAGE OF IRRADIATION.”

11:00 – 11:45. K4. Zoltán HOMONNAY. Eötvös Loránd University (Hungary). “HEXAUREA IRON(III) SALTS AS CATALYST PRECURSORS: A NOT VERY EASY TASK FOR MÖSSBAUER CHARACTERIZATION.”

Thursday Morning Session 2 (11:45 – 12:30). **Chair: Y. SHVYD’KO.** Argonne National Laboratory (USA).

11:45 – 12:00. C34. **Dániel G. MERKEL.** Wigner Research Centre for Physics (Hungary). “THREE-DIMENSIONAL ANALYSIS OF MAGNETIC NANOPATTERN FORMATION IN FeRh THIN FILMS ON MgO SUBSTRATES.”

12:00 – 12:30. I9. **Vlastimil VRBA.** Palacký University Olomouc (Czech Republic). “COHERENT CONTROL OF GAMMA PHOTONS USING ULTRASOUND ENERGY MODULATION AND ANISOTROPIC ABSORBERS.”

12:30 – 14:00. Lunch

Thursday Afternoon Session 1 (14:00 – 15:30). **Chair: J. LINDÉN.** Åbo Akademi University (Finland).

14:00 – 14:30. I10. **Edson C. PASSAMANI.** Universidade Federal do Espírito Santo (Brazil). “MÖSSBAUER SPECTROSCOPY ELUCIDATING MAGNETOCALORIC PROPERTIES OF SOLID REFRIGERANTS SUGGESTED TO BE USED IN A THERMAL-MAGNETIC CYCLE.”

14:30 – 14:45. C35. **Nobumoto NAGASAWA.** Japan Synchrotron Radiation Research Institute, JASRI (Japan). “¹⁷⁴Yb SYNCHROTRON RADIATION-BASED MÖSSBAUER SPECTROSCOPY AT 0.4 K.”

14:45 – 15:00. C36. **Yacu V. ALCA-RAMOS.** Universidad Nacional Mayor de San Marcos (Peru). “GREEN SYNTHESIS OF MAGNETIC IRON OXIDE NANOPARTICLES AND THEIR APPLICATION FOR ENVIRONMENTAL REMEDIATION.”

15:00 – 15:15. C37. **Franz RENZ.** Leibniz Universität Hannover (Germany). “MINIATURIZED MÖSSBAUER SPECTROMETER MIMOS: TOWARDS A MOON MISSION.”

15:15 – 15:30. C38. **Ilya SERGEEV.** Deutsches Elektronen-Synchrotron DESY (Germany). “NUCLEAR RESONANCE SCATTERING AT P01, PETRA III OVERVIEW AND RECENT TRENDS.”

15:30 – 16:00. Coffee break.

Thursday Afternoon Session 2 (16:00 – 16:30). **Chair: E. JARTYCH.** Lublin University of Technology (Poland).

16:00 – 16:15. C39. **Francisco H. SÁNCHEZ.** Universidad Nacional de La Plata (Argentina). “MAGNETIC PROPERTIES OF HEAVY CRUDE OILS MODIFIED WITH γ -Fe₂O₃ TOLUENE-BASED FERROFLUID.”

16:15 – 16:30. C40. **Hugo MARTÍNEZ-SÁNCHEZ.** Universidad del Valle (Colombia). “FERROMAGNETIC EXCHANGE COUPLING IN τ -Mn_{53.3}Al₄₅C_{1.7}/Fe_{58.5}Co_{31.5}X₁₀ FOR PERMANENT MAGNET.”

16:30 – 18:00. IN-PERSON POSTERS. **Chairs:** J. Piamba. Universidad de Ibagué (Colombia) – L.C. Sánchez. Universidad de Córdoba (Colombia).

20:00 – 22:00. SOCIAL PROGRAM

FRIDAY 08/09/2023

Friday Morning Session 1 (7:30 – 9:00). **Chair: G. PASQUEVICH.** Universidad Nacional de La Plata (Argentina).

7:30 – 7:45. C41. Satoshi TSUTSUI. Japan Synchrotron Radiation Research Institute, JASRI (Japan). “¹⁴⁹Sm SYNCHROTRON-RADIATION-BASED MÖSSBAUER SPECTROSCOPY OF Sm-BASED HEAVY FERMION COMPOUNDS.”

7:45 – 8:00. C42. Habibur RAHMAN. Hiroshima University (Japan). “⁵⁷Fe MÖSSBAUER SPECTROSCOPIC STUDY ON THE MAGNETIC PROPERTIES OF TANTALUM-DOPED MAGHEMITE AND HEMATITE.”

8:00 – 8:15. C43. Zinan WANG. Dalian Institute of Chemical Physics, Chinese Academy of Sciences (China). “SODIUM STORAGE AND CAPACITY RETENTION BEHAVIOR IN PRUSSIAN BLUE ANALOGUES CATHODE BASED ON OPERANDO MÖSSBAUER CHARACTERIZATION.”

8:15 – 9:00. K5. Yuri SHVYD'KO. Argonne National Laboratory (USA). “RESONANT EXCITATION OF THE NUCLEAR CLOCK ISOMER ⁴⁵Sc WITH X-RAY FREE-ELECTRON LASER PULSES.”

Friday Morning Session 2 (9:00 – 10:00). **Chair: A. QUESADA.** Instituto de Cerámica y Vidrio, CSIC (Spain).

9:00 – 9:15. C44. Cristina BARTHA. National Institute of Materials Physics (Romania). “STRUCTURAL, MÖSSBAUER SPECTROSCOPY AND MAGNETIC INVESTIGATIONS OF Gd₃Fe₅O₁₂ GARNETS OBTAINED BY DIFFERENT ROUTES.”

9:15 – 9:30. C45. Deepak PRAJAPAT. Deutsches Elektronen-Synchrotron DESY (Germany). “STUDY OF La SUBSTITUTED FOUR-LAYER AURIVILLIUS COMPOUND Bi₃FeTi₃O₁₅ USING MÖSSBAUER SPECTROSCOPY.”

9:30 – 10:00. I11. Tadeusz SZUMIATA. University of Technology and Humanities (Poland). “EFFECTIVENESS OF COMBINING MÖSSBAUER SPECTROMETRY WITH MAGNETIC AND GRAVIMETRIC METHODS IN ENVIRONMENTAL SURVEILLANCE.”

10:00 – 10:30. Coffee break.

Friday Morning Session 3 (10:30 – 11:30). **Chair: M. GRACHEVA.** ELTE Eötvös Loránd University (Hungary).

10:30 – 10:45. C46. Ganesh BERA. UGC-DAE Consortium for Scientific Research (India). “WEAK FERROMAGNETISM IN YBaCuFeO₅.”

10:45 – 11:00. C47. John F. DURÁN. Universidad del Valle (Colombia). “CORRELATION OF THE MECHANICAL AND MICROSTRUCTURAL PROPERTIES OF A FAMILY OF Fe-Mn-Al-C STEELS”

11:00 – 11:30. I12. Cynthia P.C. MEDRANO. Centro Brasileiro de Pesquisas Físicas (Brazil). “PROPERTIES OF TIN-DOPED HEMATITE SINGLE CRYSTALS”
Friday Morning Session 4 (11:30 – 12:30). **Chair: Z. HOMONNAY.** Eötvös Loránd University (Hungary).

11:30 – 11:45. C48. Sakshath SADASHIVAIAH. Helmholtz-Institut Jena (Germany). “OPTICAL CONTROL OF NUCLEAR EXCITONS.”

11:45 – 12:00. C49. Stanislaw M. DUBIEL. AGH University of Science and Technology (Poland). “EFFECT OF MAGNETISM ON LATTICE VIBRATIONS”

12:00 – 12:30. CLOSING CEREMONY

G. PÉREZ. Universidad del Valle (Colombia). Presentation of poster awards.

R. RÖHLSBERGER. Chair of IBAME. Concluding remarks.

E. JARTYCH. Lublin University of Technology (Poland). Welcome to ICAME-2025 in Gdansk - Poland.

VIRTUAL POSTERS (VP) – 7:30 - 8:30.

Tuesday (05/09/2023) and Thursday (07/09/2023)

Topic 1: Magnetism and solid-state physics

VP1. Krishanlal BHARUTH-RAM. Durban University of Technology (South Africa). “FORMATION OF $\alpha\text{-Fe}_2\text{O}_3$ CLUSTERS IN Fe IMPLANTED CRYSTALLINE SiO_2 .”

VP2. Agustín CABRAL PRIETO. Instituto Nacional de Investigaciones Nucleares (Mexico). “MAGNETIC HEATING PROPERTIES OF MAGNETITE NANOCCLUSERS PRODUCED BY PRECIPITATION.”

VP3. Benilde F.O. COSTA. University of Coimbra (Portugal). “MÖSSBAUER SPECTROMETRY AND MAGNETIC STUDIES ON $\text{La}_{1-2x}\text{Ba}_x\text{Bi}_x\text{FeO}_3$ PEROVSKITES.”

VP4. Benilde F.O. COSTA. University of Coimbra (Portugal). “INFLUENCE OF Sr DOPING ON STRUCTURAL AND MAGNETIC PROPERTIES OF M-TYPE BARIUM HEXAGONAL FERRITES.”

VP5. Shashank N. KANE. Devi Ahilya University (India). “EFFECT OF THERMAL-TREATMENT ON STRUCTURAL, MÖSSBAUER AND MAGNETIC PROPERTIES OF Zn-NANOFERRITE.”

VP6. Wataru SATO. Kanazawa University (Japan). “RISE IN THE TRANSITION TEMPERATURE OF A PEROVSKITE MANGANITE $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ BY Fe DOPING.”

VP7. **Luisa F. VARGAS**. Universidad de Antioquia (Colombia). “ROOM TEMPERATURE RECOILLESS f-FACTORS FOR THE TWO IRON SITES OF SOME SPINEL FERRITES.”

Topic 2: Chemistry

VP8. **Maren H. HOOCK**. RPTU Kaiserslautern-Landau (Germany). “NUCLEAR FORWARD SCATTERING OF PHOTO- AND CATALYTICALLY-ACTIVE IRIIDIUM COMPLEXES.”

VP9. **Arthur SANDER**. Leibniz University Hannover (Germany). “IMPROVING THE SOLUBILITY OF IRON-TRIAZOLE SPIN-CROSSOVER COMPLEXES FOR ACTUATOR APPLICATIONS.”

VP10. **Kevin TRAN**. Leibniz University Hannover (Germany). “FUNCTIONILIZED NANO FIBERS FOR AMMONIA DETECTION.”

Topic 3: Nanostructures and thin films

VP11. **Marco A.M. TUMMELEY**. RPTU Kaiserslautern-Landau (Germany). “VIBRATIONAL PROPERTIES OF MONO AND DINUCLEAR DY CONTAINING CHEMICAL COMPLEXES.”

VP12. **Sergey SATTAROV**. Jizzakh Polytechnical Institute (Uzbekistan). “NANOSCALE CLUSTERS IN SrF_2 CRYSTALS DOPED WITH $^{57}\text{FeF}_3$.”

Topic 4: Materials science and industrial applications

VP13. **Yuuki ARITA**. Tokyo Metropolitan university (Japan). “STRUCTURAL ANALYSIS OF Fe_2O_3 - V_2O_5 - P_2O_5 GLASS AND GLASS-CERAMICS AS A CATHODE MATERIAL FOR SECONDARY BATTERIES.”

VP14. **Meenal DHANETWAL**. UGC-DAE Consortium for Scientific Research (India). “STRUCTURAL AND ^{119}Sn MÖSSBAUER STUDY OF $\text{Hf}_{1-x}\text{Sn}_x\text{O}_2$.”

VP15. **Kaoru TANI**. Tokyo Metropolitan university (Japan). “THE RELATIONSHIP BETWEEN STRUCTURE AND PHOTOCATALYTIC ABILITY OF IRON SILICATE PREPARED FROM MUNICIPAL WASTE SLAG TREATED BY NITRIC ACID.”

Topic 6: Earth sciences, mineralogy, cultural heritage and environmental sciences

VP16. **Sergey K. DEDUSHENKO**. Fersman Mineralogical Museum of Russian Academy of Sciences (Russia). “MÖSSBAUER STUDY OF DESTINEZITE FROM HLOUBĚTÍN (CZECHIA).”

VP17. **Jorge L. GARCÍA**. Universidad Nacional Mayor de San Marcos (Peru).

“MAGNETIC, THERMAL CHARACTERIZATION IN ROCKS EXPOSED BY GLACIER RETREAT AND THEIR RELATIONSHIP WITH ACIDITY TROPICAL GLACIER LAKES. CORDILLERA BLANCA, HUARAZ, ANCASH REGION. PERU.”

VP18. **Jorge L. GARCÍA**. Universidad Nacional Mayor de San Marcos (Peru). “MAGNETIC, MINERALOGICAL AND THERMAL CHARACTERIZATION IN HIGH ANDEAN BOFEDAL. CHILLÓN RIVER, LIMA, PERU.”

VP19. **Rene GIESELER**. Leibniz University Hannover (Germany). “MÖßBAUER MEASUREMENTS AT DAG 400 METEORITE SAMPLE AND RETURN SAMPLE MEASUREMENT OPPORTUNITIES UNDER INERT GAS.”

VP20. **Rene LUCKA**. Leibniz Universität Hannover (Germany). “CORROSION IN BENTONITE BARRIERS OBSERVED BY MÖSSBAUER SPECTROSCOPY.”

VP21. **Simón E. SUÁREZ-GÓMEZ**. Universidad EAFIT (Colombia). “CHARACTERIZATION OF THE RUST PRODUCTS FROM A RAILROAD CLAMPING ELEMENT BELONGING TO THE OLD RAILWAY OF ANTIOQUIA, COLOMBIA.”

VP22. **Francesca FERNANDINI**. Pontificia Universidad Católica del Perú (Peru). “STUDY OF SOILS FROM THE PROVINCE OF AYABACA, PIURA PERU BY ANALYTICAL AND COMPLEMENTARY TECHNIQUES.”

VP23. **Alejandro L. TRUJILLO QUINDE**. Universidad Nacional Mayor de San Marcos (Peru). “STUDY SOILS FROM THE CALABOZO TOWN, CAJAMARCA PERU BY ANALYTICAL AND COMPLEMENTARY TECHNIQUES.”

VP24. **Francesca FERNANDINI**. Pontificia Universidad Católica del Perú (Peru). “STUDYING CERRO DE ORO CERAMICS FROM CAÑETE, PERÚ USING MÖSSBAUER SPECTROSCOPY AND X RAY DIFFRACTION.”

VP25. **Jorge A. BRAVO CABREJOS**. Universidad Nacional Mayor de San Marcos (Peru). “MINERALOGICAL STUDY OF SOILS FROM THE TOWN OF CANOA, LIMA PERU BY ANALYTICAL AND COMPLEMENTARY TECHNIQUES.”

VP26. **Jorge A. BRAVO CABREJOS**. Universidad Nacional Mayor de San Marcos (Peru). “ADVANCE IN THE CHARACTERIZATION OF SOILS FROM COFFEE PLANTATIONS IN THE SHIMANILLA VILLAGE, CAJAMARCA REGION, PERU.”

VP27. **Alejandro L. TRUJILLO QUINDE**. Universidad Nacional Mayor de San Marcos (Peru). “CHARACTERIZATION OF SOILS FROM THE LAS LOMAS DISTRICT, PIURA PERU BY ANALYTICAL AND COMPLEMENTARY TECHNIQUES.”

VP28. **Qiuxia WANG**. China University of Geosciences (China). “HETEROGENEOUS REDOX STATE OF LITHOSPHERIC MANTLE UNDER THE NORTH CHINA: NEW EVIDENCE FROM ^{57}Fe MÖSSBAUER SPECTROSCOPY.”

Topic 8: Experimental techniques, methodology and coherent phenomena

VP29. **Friedrich W. BAUER**. Leibniz Universität Hannover (Germany). “MÖSSBAUER SPECTROMETER MIMOS ON AN AIR VEHICLE NASA MISSION TO MARS – PROOF OF PRINCIPLE.”

VP30. **Mohammad BEYKI**. Leibniz Universität Hannover (Germany). “SIMULATIVE DEVELOPMENT OF THE MÖSSBAUER SPECTROSCOPY WITH FOCUS ON THE TRANSIMPEDANCE OF THE PHOTODIODE CIRCUIT.”

VP31. **Justus PAWLAK**. Leibniz Universität Hannover (Germany). “2D DATA PROSSESING WITH MIMOS II.”

VP32. **Hiroyuki YAMASHITA**. Kyoto University (Japan). “MESUREMENT OF THE SUB-NANOMETER VIBRATION AMPLITUDES USING ^{57}Fe SYNCHROTRON MÖSSBAUER SOURCE.”

VP33. **Mio YOSHIDA**. The University of Electro-Communications (Japan). “STUDY ON IONIC CONDUCTIVITY OF CaF_2 BY IN-BEAM MÖSSBAUER SPECTROSCOPY.”

IN-PERSON POSTERS (P) – 16:30 - 18:00.
Tuesday (05/09/2023) and Thursday (07/09/2023)

Topic 1: Magnetism and solid-state physics

P1. **Jailles J. BELTRÁN**. Universidad de Córdoba (Colombia). “EFFECT OF Sb IONS IN Fe DOPED SnO_2 NANOPARTICLES.”

P2. **Mateus DUTRA**. Universidade Federal do ABC (Brazil). “THE TOPOLOGICAL INSULATOR EuZn_2P_2 : SINGLE CRYSTAL GROWTH AND CHARACTERIZATION BY ^{151}Eu MÖSSBAUER SPECTROSCOPY AND ELECTRON SPIN RESONANCE.”

P3. **Magno A. VERLY HERINGER**. Centro Brasileiro de Pesquisas Físicas (Brazil). “MAGNETIC PROPERTIES OF $\text{Mn}_{1-x}\text{Fe}_x\text{As}$ MAGNETOCALORIC COMPOUNDS STUDIED BY A LOCAL PROBE.”

P4. **Abdel-Fatah D. LEHLOOH**. Yarmouk University (Jordan). “MÖSSBAUER SPECTROSCOPY STUDY OF M-TYPE HEXAFERRITE ($\text{BaFe}_{12-x}\text{Ti}_x\text{O}_{19}$) PREPARED BY SOL-GEL PROCEDURE.”

- P5. **Julián A. MUNEVAR**. Universidade Federal do ABC (Brazil). "SITE DISORDER INFLUENCE ON THE MAGNETIC PROPERTIES OF $(Y,Gd)Ba_{1-x}Sr_xFeCuO_5$ MULTIFERROIC OXIDES STUDIED BY ^{57}Fe MÖSSBAUER SPECTROSCOPY."
- P6. **Kiyoshi NOMURA**. Tokyo Medical University (Japan). " ^{57}Fe MÖSSBAUER SPECTROMETRY OF $SrTiO_{3-D}$ PEROVSKITE OXIDES DOPED WITH DILUTE Fe AND Sn UNDER PERMANENT MAGNET."
- P7. **Kiyoshi NOMURA**. Tokyo Medical University (Japan). "THE ROLE OF IMPURITIES AND OXYGEN VACANCY OF $SrTiO_3$ PEROVSKITE OXIDE: AB INITIO AND ^{57}Fe MÖSSBAUER STUDIES."
- P8. **Kiyoshi NOMURA**. Tokyo Medical University (Japan). " ^{57}Fe MÖSSBAUER STUDY OF $SrTiO_{3-D}$ PEROVSKITE OXIDES DOPED WITH DILUTE Fe AND Nb."
- P9. **Dagoberto OYOLA LOZANO**. Universidad del Tolima (Colombia). "STUDY BY MÖSSBAUER SPECTROSCOPY OF THE $FeAlB$ SYSTEM OBTAINED BY MECHANICAL ALLOYING."
- P10. **Oscar ARNACHE**. Universidad de Antioquia (Colombia). "ELASTIC PROPERTIES AND FORMATION MECHANISM OF $(Ni,Zn)Fe_2O_4$ INVERSE SPINELS."
- P11. **Claudia E. RODRÍGUEZ TORRES**. Universidad Nacional de La Plata (Argentina). "DFT STUDY OF ELECTRONIC STRUCTURE AND MAGNETIC AND HYPERFINE PROPERTIES OF Fe_2AlO_4 AND $FeAl_2O_4$ "
- P12. **Yebrail A. ROJAS MARTÍNEZ**. Universidad del Tolima (Colombia). "A MAGNETIC AND MOSSBAUER SPECTRAL STUDY OF $Tb_{0.257-x}Nd_xFe_{0.743}$ ALLOYS, WITH $x=0.128, 0.257$."

Topic 2: Chemistry

- P13. **Jules BREHME**. Leibniz Universität Hannover (Germany). "SOLUBLE MOLECULAR SWITCHES IN ELECTROSPUN NANOFIBERS."

Topic 3: Nanostructures and thin films

- P14. **Yacu V. ALCA-RAMOS**. Universidad Nacional Mayor de San Marcos (Peru). "FUNCTIONALIZATION OF SILLAR OF AREQUIPA REGION (PERU) WITH IRON OXIDE NANOPARTICLES."
- P15. **Zulia CAAMAÑO DE ÁVILA**. Universidad del Atlántico (Colombia). "MÖSSBAUER STUDY OF NANOSTRUCTURED $Fe_{50}Co_{50}$ POWDERS."
- P16. **Maximilian S. KILIC**. Leibniz Universität Hannover (Germany). "THIN FILMS WITH MOLECULAR SWITCHES FOR OPTICAL APPLICATIONS."

- P17. **Libor MACHALA**. Palacký University Olomouc (Czech Republic). “THE EFFECT OF MICROWAVE HEATING ON THE PROPERTIES OF ZINC FERRITE NANOPARTICLES.”
- P18. **José F. MARCO**. Instituto de Química Física “Rocasolano”, CSIC (Spain). “ICEMS CHARACTERIZATION OF $\text{Ni}_x\text{Fe}_{3-x}\text{O}_y$ ($0.7 \leq x \leq 1.7$) THIN FILMS GROWN BY ION BEAM SPUTTERING ON (0001) Al_2O_3 SUBSTRATES.”
- P19. **Silvana STEWART**. Universidad Nacional de La Plata (Argentina). “DISTINGUISHING NANOSTRUCTURED Al-DOPED MAGHEMITE FROM Al-Fe SPINEL USING MÖSSBAUER SPECTROSCOPY”

Topic 4: Materials science and industrial applications

- P20. **José M. BRUQUE ALMEIDA**. Escuela Superior Politécnica del Litoral, ESPOL (Ecuador). “Cr-RICH PHASE SEGREGATION IN A FERRITIC AISI 430 STAINLESS STEEL.”
- P21. **Ángel BUSTAMANTE DOMÍNGUEZ**. Universidad Nacional Mayor de San Marcos (Peru). “CHARACTERIZATION AND MÖSSBAUER SPECTROSCOPY OF SOLID STATE RECYCLED HRB335 STEEL FABRICATED BY POWDER METALLURGY”
- P22. **Eduardo CHUNG**. Universidad de Panamá (Panama). “MÖSSBAUER STUDY OF THE MILLING EFFECT ON THE PHASE PURITY OF COPPER FERRITE OBTAINED BY SOLID-STATE SYNTHESIS.”
- P23. **Demóstenes J. DURANGO**. Universidad de Córdoba (Colombia). “MÖSSBAUER AND MAGNETIC STUDY OF $\text{La}_{2/3}\text{Ca}_{1/3}\text{Mn}_{0.97}\text{Fe}_{0.03}\text{O}_3$ ”
- P24. **Danis GÓMEZ**. Universidad de Antioquia (Colombia). “REVISING THE KINETIC MODELING AND MÖSSBAUER STUDIES ON ADSORPTION OF SOME WATER CONTAMINANTS BY MICRO- AND NANO- SIZED AKAGANEITES.”
- P25. **Irina A. MANAKOVA**. Institute of Nuclear Physics (Kazakhstan). “MÖSSBAUER AND X-RAY DIFFRACTION STUDIES OF THE EFFECT OF ^{57}Fe IONS IRRADIATION ON THE STRUCTURAL-PHASE STATE OF METALS.”
- P26. **Irina A. MANAKOVA**. Institute of Nuclear Physics (Kazakhstan). “MÖSSBAUER AND X-RAY DIFFRACTION STUDIES OF THE MINERALOGICAL COMPOSITION OF BAUXITES OF KAZAKHSTAN.”
- P27. **Antoine MULABA BAFUBIANDI**. University of Johannesburg (South Africa). “ ^{57}Fe MOSSBAUER SPECTROSCOPY IN THE ENERGY COMMODITY TRANSITION: CATALYSIS APPLICATION.”

- P28. **Carlos OSTOS**. Universidad de Antioquia (Colombia). "SURFACE AND INTERFACE ANALYSIS IN PT/ZnFO/SI(111): AN EVIDENCE OF CHANGES IN THE CHEMICAL STATE OF IRON."
- P29. **Juan M. OVIEDO**. Universidad de Córdoba (Colombia). "CERIUM DOPED LANTHANUM FERRITES OBTAINED BY SOL-GEL METHOD: A STRUCTURAL, MAGNETIC AND MÖSSBAUER SPECTRAL STUDY"
- P30. **Caio V. P. PASCOAL**. Federal University of Ceará (Brazil). "APPLICATION OF MÖSSBAUER SPECTROSCOPY IN PARALLEL WITH X-RAY DIFFRACTION AND RAMAN SPECTROSCOPY TECHNIQUE TO THE STUDY OF CORROSION INHIBITORS."
- P31. **José R. C. PROVETI**. Universidade Federal do Espírito Santo (Brazil). "NON-STOICHIOMETRIC MAGNESIUM FERRITE COMPOUND: MAGNETIC REMEDIATION FOR PHOSPHORUS REMOVAL FROM CONTAMINATED WATER."
- P32. **Ruby R. RODRÍGUEZ**. Universidad Autónoma de Occidente (Colombia). "MILLING TIME EFFECT ON THE MAGNETIC AND STRUCTURAL PROPERTIES $\text{Fe}_{10}\text{Mn}_{10}\text{Al}_5\text{Ni}_{75}$ ALLOY."
- P33. **Luis C. SÁNCHEZ**. Universidad de Córdoba (Colombia). "MÖSSBAUER STUDY OF FeNiB ALLOYS OBTAINED BY INDUCTION WITH SUCCESSIVE MECHANICAL MILLING."
- P34. **Luis C. SÁNCHEZ**. Universidad de Córdoba (Colombia). "MILLING TIME EFFECTS ON THE MICROSTRUCTURAL AND HYPERFINE PROPERTIES OF FeCuB ALLOYS."
- P35. **Jesús A. TABARES**. Universidad del Valle (Colombia). "MAGNETIC AND STRUCTURAL PROPERTIES OF THE Mn-Al SYSTEM PREPARED BY ARC-MELTING AND BY MELT SPINNING FOR APPLICATIONS IN PERMANENT MAGNETS."
- P36. **Juan S. TRUJILLO HERNÁNDEZ**. Universidad del Valle (Colombia). "MAGNETIC AND STRUCTURAL PROPERTIES OF THE Mn-Bi SYSTEM PREPARED BY ARC-MELTING AND BY MELT SPINNING FOR APPLICATIONS IN PERMANENT MAGNETS."

T05: Biological and medical applications

- P37. **Patricia I. ARREDONDO**. Universidad de Antioquia (Colombia). "MAGNETIC PROPERTIES OF β -HEMATIN PREPARED IN AQUEOUS-ACETATE MEDIUM IN PRESENCE OF CHLOROQUINE."
- P38. **Leidy J. HERRERA**. Universidad de Antioquia (Colombia). "MÖSSBAUER STUDY OF β -HEMATIN CRYSTALS SYNTHETIZED IN AQUEOUS AND

AQUEOUS-OILY MEDIUMS IN PRESENCE OF SOME ANTIMALARIALS.”

P39. **Mikhail I. OSHTRAKH**. Ural Federal University (Russia). “COMPARISON OF TWO PHARMACEUTICAL PRODUCTS CONTAINING FERROUS SULPHATE USING MÖSSBAUER SPECTROSCOPY.”

P40. **Alvaro A. VELÁSQUEZ**. Universidad EAFIT (Colombia). “SYNTHESIS AND CHARACTERIZATION OF MAGNETITE-MAGHEMITE NANOPARTICLES COATED WITH CHITOSAN, FOR BIOMEDICAL APPLICATIONS.”

Topic 6: Earth sciences, mineralogy, cultural heritage and environmental sciences

P41. **Oscar L. ARNACHE**. Universidad de Antioquia (Colombia). “MÖSSBAUER STUDY OF PRE-COLUMBIAN FERRERIA STYLE CERAMICS FROM FINDS IN EL CARMEN DE VIBORAL-ANTIOQUIA, COLOMBIA.”

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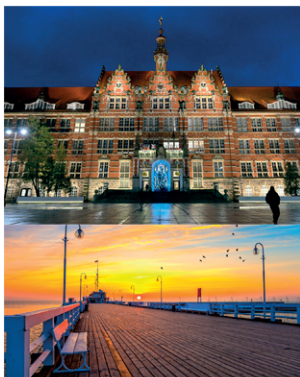
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**ICAME & HYPERFINE
2025
GDAŃSK - POLAND**

Welcome to ICAME & HYPERFINE 2025 in GDAŃSK-POLAND!

It is our great pleasure to invite all of you to participate in the **38th International Conference on the Applications of the Mössbauer Effect, ICAME**, and the **International Conference on Hyperfine Interactions and Their Applications, HYPERFINE**, which will be held in Gdańsk, Poland, between **7th** and **12th September 2025**.

Continuing the tradition of joint ICAME and HYPERFINE conferences in Brasov, Romania in 2021, we invite everyone to active participation in both events. The years of the pandemic have strongly weakened the direct contact of scientists, and the organization of hybrid conferences does not meet expectations. That is why we strongly encourage you to attend the ICAME and HYPERFINE conferences **in person**. The conferences are organized by the Polish community of scientists specializing in Mössbauer spectroscopy and hyperfine interactions from different universities in Poland.

The proposed venue is in **Gdańsk** which is a popular city in northern Poland with almost half a million inhabitants. It is an important cultural, scientific and economic center with good air connection with most European cities. The location on the Baltic Sea guarantees good conditions for work and rest. It is a city with over a thousand years of history, whose identity over the centuries has been shaped under the influence of various cultures. Gdańsk is considered a symbolic place of the beginning of the fall of communism in Central Europe, it is the city of Lech Wałęsa and Solidarity.



The **scientific program** of both conferences will cover the traditional topics of the previous ICAME and HYPERFINE events. We are planning a common book of abstracts, a joint welcome session and coffee breaks, plenary sessions as well as parallel sessions, tutorials on both Mössbauer and hyperfine topics, and joint social events.

All information regarding both conferences will be published on a regular basis on the website:

<https://icame-hi-2025.pollub.pl>

In all matters concerning the conference, please contact us at the following address:

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We warmly invite all the Mössbauer and Hyperfine community and look forward to seeing you in Gdańsk.

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