

April 22, 2025 Tuesday

ESR & Rising star e-symposium

(Projection at a.304 – Microsoft Teams)

Session A: e-oral communications

Location: Teams session & projection at a.304, Lavoisier Building

Chairs: Dr. Koen ROBEYNS & Dr. Youssef DRAOUI (UCLouvain)

14:00 – 14:10	Oral (e1) Dr. Sumbal FARID (DICP Dalian, China) In-situ/operando Mössbauer spectroscopic investigations of Fe-involved OER electrocatalysts
14:10 – 14:20	Oral (e2) Dr. Weiyang LI (Liaoning Petroch. Univ., China) Spin-state versatility in Fe(II) ₄ L ₆ supramolecular cages with a pyridyl-hydrazone ligand scaffold modulated by solvents and counter anions
14:20 – 14:30	Oral (e3) Dr. Zoi LADA (Univ. Patras, Greece) Modulating Spin Crossover (SCO) Transition for the Optimization of SCO-Based Temperature Sensors
14:30 – 14:40	Oral (e4) Xiaochun LI (UCLouvain, Belgium) Hysteretic Two-Step Spin Crossover of an Iron(II) 4,4'-bis-1,2,4-triazole Framework
14:40 – 14:50	Oral (e5) Corentin POCHET (UCLouvain, Belgium) Polypyrazoles ligands: Using second coordination sphere for tuning metal complexes properties
14:50 – 15:00	Oral (e6) Dr. Irina KHÜNE (FZU, Czech Republic) Gas Sensing using Polyionic Liquids: A Path to Smarter Detection
15:00 – 15:10	Oral (e7) Dr. Chaimae MERIMI (UMP Oujda, Morocco) Investigating the Corrosion Inhibition of Carbon Steel in Acidic Environments: A Synthesis of Theoretical and Experimental Studies on the Effect of Diazole Compounds
15:10 – 15:20	Oral (e8) Dr. Mohamed AZZOUZI (UMP Oujda, Morocco) Synthesis, Characterization, and Biological Evaluation of Novel Heterocycles with Imidazopyridine and Imidazothiazole Motifs: Experimental Studies and Theoretical Insights
15:20 – 15:30	Oral (e9) Islam QORRI (UMP Oujda, Morocco) Synthesis, Characterization, and C-H Activation of Transition Metal Complexes with Functional Pyrazole Ligands

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15:30 – 15:40	Oral (e10) Charles PARIS (GPM Rouen, France) Direct recycling of LiFePO ₄ cathodes with polyol solvent
15:40 – 15:50	Oral (e11) Souad MOHKLISS (Chouaïb Doukkali Univ., Morocco) <i>Total catalytic oxidation of the ethanol over cobalt-doped nickel phosphate catalyst</i>
16:00 – 17:00	Pre-Registration for GFSM 2025 (Hall 1st floor, Lavoisier building)

Session B: NANOCHEMISTRY

Location: Teams session & projection at a.304, Lavoisier Building

Chair:	Prof. Jean-François GOHY & Dr. Koen ROBEYNS (UCLouvain)
16:20 – 16:50	E-Keynote Prof. Guillaume De BO (Un. Manchester, UK) Controlling reactivity under tension

Session C: e-posters

Location: Teams session & projection at a.304, Lavoisier Building

Chair:	Dr. Mengmeng WANG & Dr. Youssef DRAOUI (UCLouvain)
16:50	Oral flash presentations and posters

e-poster section programme

April 22, 2025 Tuesday

- eP1- Justina KARCIAUSKAITE** (Vilnius university, Lithuania)
On the Formation and Characterization of Calcium Hydroxyapatite Composite with Eugenol
- eP2- Wioletta KOPEC** (IMP PAN Gdansk, Poland)
Uv-vis absorbance for determining the spin state of the Fe(pz)[Pt(CN)₄] deposited by MAPLE method – experimental and theoretical approach
- eP3- Dr. Sergey DEDUSHENKO** (Moscow State University, Russia)
A less shameful way to compare Mössbauer isomer shifts of iron compounds
- eP4- Dr. Komala PANDURANGAN** (UCDublin & REVA University, Bangalore, India)
Effects of Ligands and Counterions on Mn(III) Spin Crossover Phenomenon
- eP5- Dr. Hacene BENDJEFFAL** (ENSET, Skida, Algeria)
Effect tris(8-hydroxyquinoline) metals complex on the optical and electrical properties of polyaniline thin films prepared by the IDR- technique
- eP6- Ilham KOSSAI** (Chouaïb Doukkali University, El Jadida, Morocco)
Manufacture of activated carbons from bio-waste: Adsorption and Advanced Oxidation of Diclofenac
- eP7- Najah RHIMI** (GPM Rouen, France)
Structural and Magnetic Investigations of Iron-Based Pyrite
- eP8- Abdessamad BENABBOU** (UMP Oujda, Morocco)
Synthesis of two novel metal complexes for anti-bayoud activity and catalytic applications
- eP9- Ziloukha RIDAL** (UMP Oujda, Morocco)
New complex based on functional pyrazole with Zn(II): Synthesis characterization, catecholase and ADMET activities

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eP10- **Meriem El MRANI** (UMP Oujda, Morocco)

Development of Eco-Friendly Hybrid Biomaterials: Polyelectrolyte Multilayer Films Based on Carboxymethylcellulose and Chitosan for Environmental and Biomedical Applications

eP11- **Nouhaila AMRANI** (UMP Oujda, Morocco)

Phytochemical Study and Evaluation of The Antioxidant Activity of Essential Oil and Aqueous Extract Obtained by Reflux Heating of Piper nigrum Seeds

eP12- **Zakariae ABBAOUI** (UMP Oujda, Morocco)

Synthesis of Novel Se–NHC Complexes and Their Catalytic and Biological Applications

eP13- **Elmehdi FRAJ** (UMP Oujda, Morocco)

Synthesis and antimicrobial evaluation of novel Selenium-N-heterocyclic carbene (NHCs) complexes

eP14- **Rania ABIDI** (UMP Oujda, Morocco)

Physico-Chemical Characterization of Carboxymethyl Cellulose Hydrogels: Swelling Behavior and Network Structure

eP15- **Lamia BOURASSI (UMP Oujda, Morocco)**

Study of Cellulose Dissolution in ZnO/NaOH/Water Solvent Solution and Its Temperature-Dependent Effect Using Molecular Dynamics Simulation

eP16- **Mohamed El BOUTAYBI** (UMP Oujda, Morocco)

Exploring the Catalytic Activity of Complexes with Pyrazole Frameworks in Catechol and Aminophenol Oxidation

eP17- **Hasnae ARRASS** (UMP Oujda, Morocco)

Exploring biomimetic approach to produce new efficient catalysts for oxygen activation

eP18- **Afaf EL IDRISSE** (UMP Oujda, Morocco)

3,5-Dimethylpyrazole Complexes with Zn(II), Co(II), Cu(II) and Fe(II): Synthesis, Characterisation and Applications

eP19- **Tristan LAURENT** (UCLouvain, Belgium)

Mimicking the PLP co-factor

eP20- **Dominik MASKOWICZ** (IMP Gdansk, Poland)

Hydroxyapatite nanocoatings deposited by Resonant-matrix pulsed laser evaporation

eP21- **Abdelilah BENMEHDI** (UMP Oujda, Morocco)

Extraction of Bioactive Metabolites from Various Honey Samples, Polyphenol Quantification, and Antioxidant Activity Assessment Using DPPH and ABTS Tests

eP22- **Adelhakim M'HARZI** (UMP Oujda, Morocco)

Molecular Insights into the Chemical Composition and Antioxidant Activity of Rosmarinus officinalis Essential Oils and By-Products: A Comparative Study

eP23- **Robert MARKOWSKI** (UCLouvain, Belgium)

Coordination Polymers for High Performances Post-Li Batteries

eP24- **Smaail RADI** (UMP Oujda, Morocco)

Engineered cellulose for sustainable selective removal of toxic metals: Advanced adsorption strategies with nitrogen ligands

eP25- **Hanna RABL-WOLF** (Uni. Vienna, Austria)

Metal organic chalcogenolate assemblies (MOCHAs) - their synthesis, characterization and application in electrocatalytic CO₂ reduction

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April 23, 2025 Wednesday

08:30 – 9:00 **Registration (Hall Sciences)**

Location: Auditorium A02, Sciences Building

IMCN Seminars

Location: Auditorium A02, Sciences Building

Chairs: **Prof. E. VAN RUYMBEKE (UCLouvain) & Prof. A. TAUBERT (Postdam)**

09:00 – 10:00 **P1 Prof. Jean-Marie LEHN (Univ. Strasbourg, France)**
In memoriam Prof. Philipp Gütllich (Uni. Mainz, Germany)
Towards Adaptive Nanoscience and Nanotechnology

10:00 – 10:30 **K1 Prof. Shin-ichi OHKOSHI (Univ. Tokyo, Japan)**
Multifunctional materials based on cyano-bridged metal complexes

10:30 – 11:00 **IMCN Coffee break (Hall Sciences)**

11:00 – 11:20 **Opening Ceremony**
Prof. Sophie HERMANS Prof. Yann GARCIA
Chairwoman IMCN UCLouvain GFSM chair

Dr. Abdelfattah MAHMOUD Wioletta KOPEC
Liège, GFSM 2025 PAN Gdansk GFSM 2025

Location: Auditorium A02, Sciences Building

Session 1: HYBRID MATERIALS

Location: Auditorium A02, Sciences Building

Chairs: **Prof. S.-i. OHKOSHI (Tokyo) & Prof. J. JURASZEK (Rouen)**

11:20 – 11:50 **K2 Prof. Andreas TAUBERT (Univ. Potsdam, Germany)**
Metal-based ionic liquids and ionic solids: a toolbox for materials design

11:50 – 12:20 **K3 Prof. Volker SCHÜNEMANN (RPTU Kaiserslautern, Germany)**
What can we learn about nano- and molecular magnets with 57-Fe and 161-Dy nuclear probes?

12:20 – 12:40 **I1 Dr. Maria GRACHEVA (CER Budapest, Hungary)**
The role of organic acids and coumarins in iron complexation and reduction in plants

12:45 - 14:00 **Lunch (Lavoisier cafeteria, 3rd floor)**

April 23, 2025 Wednesday

Session 2: CATALYSIS, MOLECULAR CHEMISTRY

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: Prof. V. SCHÜNEMANN (Kaiserslautern) & Dr. A. NAMAI (Tokyo)

14:00 – 14:30 **K4 Prof. Dmtri GELMAN (Hebrew Univ, Israël)**
Modular Pincer Catalysts for CO₂ Hydrogenation

14:30 – 15:00 **K5 Dr. Yiannis SANAKIS (NCSR Athens, Greece)**
Spectroscopic Studies of an Iron Based Metal Organic Framework

15:00– 15:15 **O1 Dr. Romain COUSTEL (LCPME, France)**
Green Rusts and Phosphate Interactions: Stabilization and Reactivity

15:15 – 15:30 **O2 Dr. Marilyn E. D MELLO (USantiago de Compostela, Spain)**
Chemical Design of Redox Covalent Organic Frameworks as High Energy Density Cathodes for Li-ion Batteries

15:30 – 15:45 **GFSM Thesis prize. Dr. Eva CHOKER (GPM Rouen, France)**
Magnetic order in spinel compounds for thermoelectric applications

16:00 – 16:30 Coffee break (Hall 1st floor)

Session 3: BATTERY SESSION

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: Prof. A. VLAD (UCLouvain) & Dr. P. E. LIPPENS (ICGMontpellier)

16:30 – 17:00 **K6 Prof. Junhu WANG (DICP Dalian, China)**
Development of Highly Efficient Prussian Blue Cathode Materials for Sodium Ion Batteries Guided by Advanced Characterization techniques

17:00 – 17:30 **K7 Dr. Hab. Moulay Tahar SOUGRATI (ICGMontpellier, France)**
Sustainable recycling: Innovative room-temperature methods for spent LFP regeneration

17:30 – 17:45 **O3 Dr. Abdelfattah MAHMOUD (ULiège, Belgium)**
Direct recycling of spent NCA and LFP cathode materials for Li-ion batteries

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17:45 – 18:00

O4 Dr. Hasna AZIAM (MVI Polytech., Morocco)

Role of 57-Fe Mössbauer spectroscopy in understanding the reaction mechanism of electrode materials: case study of MFe(III)OPO_4 ($\text{M} = \text{Co, Ni}$) and $\text{Li}_{3.27}\text{Fe(III)}_{0.81}\text{Fe(II)}_{0.19}\text{V(PO}_4)_3$ for Lithium-ion batteries

18:00 – 18:15

O5 Dr. Jérôme BODART (ULg, Belgium)

Synergistic effect of iron substitution by manganese and carbon addition in $\text{Na}_2\text{FePO}_4\text{F}$ to enhance its electrochemical performance as a cathode for sodium-ion batteries

18:15 – 19:30

LOCAL BREW TASTING (Cafeteria Lavoisier, 3rd floor)

Beers presentation by **Dr. Thomas XHURDEBIZE**

April 24, 2025 Thursday

08:30 – 9:00 **Registration (Hall 1st floor, Lavoisier)**

Session 4: SPIN CROSSOVER (part 1)

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: Prof. K. BOUKHEDDADEN (PSaclay) & Dr. J. WOLNY (Kaiserslautern)

09:00 – 09:30 **K8 Dr. Paulo MARTINHO (Univ. Lisbon, Portugal)**
Modulation of Spin Crossover in Iron(III) Complexes

09:30 – 10:00 **K9 Prof. Aurelian ROTARU (Stefan cel Mare Univ., Romania)**
Integration of Spin Crossover Materials into Organic Electronics: From Nanocomposite to Field-Effect Transistors

10:00 – 10:20 **I2 Dr. Asamu NAMAI (Univ. Tokyo, Japan)**
Synthesis and Functional Applications of ϵ -Iron Oxide Nanomagnet: Exploiting Its Magnetic Anisotropy

10:20 – 10:35 **O6 Dr. Mengmeng WANG (UCLouvain, Belgium)**
Aromatic Substitution-Tuned Spin Crossover Behavior of $[\text{Fe}(\text{H}_2\text{Bpz}_2)_2(\text{bipy-R})]$ Complexes

10:35 – 10:50 **O7 Vladyslav MALIUZHENKO (Univ. Wroclaw, Poland)**
Investigating the Impact of Ligand Chirality on Spin Crossover Behavior in Iron(II) Complexes

10:50 – 11:20 **Coffee break (Hall 1st floor)**

Session 5: SPIN CROSSOVER (part 2)

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: Prof. M. SINGLETON (UCLouvain) & Dr. P. MARTINHO (Lisbon)

11:20 – 11:50 **K10 Prof. Kamel BOUKHEDDADEN (PSaclay, France)**
Imaging and modeling the Spatio-Temporal Dynamics of First-Order Phase Transitions in Charge Transfer and Spin-Crossover Molecular Single Crystals

11:50 – 12:20 **K11 Prof. Hans-Jörg KRÜGER (RPTU Kaiserslautern, Germany)**
Spin Crossover Processes in Iron(II) Complexes Containing p-Radical Ligands

12:20 – 12:35 **O8 Dr. Juliusz WOLNY (RTPU Kaiserslautern, Germany)**
Exploration of short-range elastic interactions in spin crossover materials by DFT and Nuclear Inelastic Scattering

12:35 – 12:50 **O9 Dr. Giordano PONETI (UdStudi della Tuscia, Italy)**
Redox-active Magnetic Switchable Molecular Materials

13:00 – 14:00 **Walking Lunch** (Cafeteria Lavoisier, 3rd floor)

Session 6: MATERIALS SCIENCE

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: **Prof. A. ROTARU (Suceava) & Prof. H.-J. KRÜGER (Kaiserslautern)**

K12 Dr. Pierre-Emmanuel LIPPENS (ICGM, France)
14:00 – 14:30 Electrochemical mechanisms in batteries investigated by Mössbauer spectroscopy

I3 Dr. Andreja JELEN (JSI, Ljubljana, Slovenia)
14:30 – 14:50 Complex nanostructures of the high-entropy alloys

I4 Dr. Julianna OLAH (Budapest UTech. Hungary)
14:50 – 15:10 Development of Fe SCO compounds and iron catalysts: How can computational chemistry contribute?

O10 Joseph KFOURY (Budapest UTech., Hungary)
15:10 – 15:25 Exploration of Spin Crossover Phenomena in Tetrahedral Fe(II) Cage Systems

O11 Atharva U. SAPRE (FZU, Czech Republic)
15:25 – 15:40 Investigating the thin film growth of [Ni(HVanox)₂] by microscopic and spectroscopic techniques

O12 Chiara ROMEO (Univ. Trento, Italy)
15:40 – 15:55 Influence of Filler-Matrix Interactions on Thermal Conductivity in Ladder-like Polysilsesquioxane-Al₂O₃ Nanocomposites

16:00 – 16:30 **Coffee break** (Hall 1st floor)

Session 7: HYBRID MATERIALS

Location: Auditorium LAVO 51, Lavoisier Building

Chairs: **Dr. A. JELEN (Ljubljana) & Dr. M. GRACHEVA (Budapest)**

O13 Dr. Serkan BIYIK (Karadeniz TU, Turkey)
16:30 – 16:45 Effect of Zinc Stearate and Ball-to-Powder Weight Ratio on the Ball Milling Behavior of Cu-B₄C Composite Powder

O14 Panagiota BIKI (Demokritos NCSR, Athens)
16:45 – 17:00 COF functionalization on melamine sponges for the detection and extraction of copper from aqueous environments

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O15 Andrei G. BUZYKIN (ITMO Univ, Russia)

17:00 – 17:15 Laser Ablation for Wettability Patterning on GPOSS-PDMS Films

O16 Dhouha NAJLAOUI (Univ. Paris Saclay, France)

17:15 – 17:30 An enzymatic electrochemical hydrogen peroxide and glucose sensors based on silver-copper (I)-nanoparticles-oxidized green rust nanohybrids

O17 Tom GOOSSENS (UCLouvain, Belgium)

17:30 – 17:45 Mixed Proton-Electron Conductivity in a Dynamic 3D Metal-Organic Framework

18:30 – Banquet dinner (Louvain House)

April 25, 2025 Friday

Location: Auditorium LAVO 51, Lavoisier Building

Chair : Prof. Y. GARCIA (UCLouvain)

09:00–10:00 **Assemblée Générale GFSM**

Session 8: MAGNETISM

Location: Auditorium LAVO 51, Lavoisier Building

Chair: Dr. Y. SANAKIS (Athens)

10:00–10:30 **K13 Dr. Jean JURASZEK (GPM Rouen, France)**
Probing the magnetism of iron compounds by 57-Fe spectroscopy

10:30–10:50 **I5 Dr. Stjepko KREHULA (Ruder Boskovic Inst., Croatia)**
Mössbauer Spectroscopy Investigation of Doped Iron Oxides

10:50- 11:20 Coffee break (Hall 1st floor)

Session 9: FUNCTIONAL OXIDES

Location: Auditorium LAVO 51, Lavoisier Building

Chair: Prof. L. TROIAN-GAUTIER (UCLouvain)

11:20-11:40 **I6 Dr. Marie YOSHIKIYO (Univ. Tokyo, Japan)**
Investigation of diverse functionalities in a novel titanium oxide λ -Ti₃O₅

11:40-11:55 **O18 Dr. Najah RHIMI (Univ. Monastir & GPM Rouen)**
Synthesis and Investigation of the Physical Properties of a Perovskite Composite (1-x) Na_{0.5}Bi_{0.5}TiO₃ / x BiCu_{0.75}W_{0.25}O₃

11:55-12:10 **O19 Dr. Youssef DRAOUI (UCLouvain, Belgium)**
Highly Efficient Lead Removal from Contaminated Water Using a Novel Porphyrin-Functionalized MCM-41 Mesoporous Material

AWARDS CEREMONY

Location: Auditorium LAVO 51, Lavoisier Building

Chair: Dr. M. DUTTINE (Bordeaux)

12:10-12:30 **Awards ceremony & closing remarks**

12:30 Farewell Lunch (Hall 1st floor, Lavoisier Building)
