7th International Conference on RARE EARTH MATERIALS

REMAT'26

3-6 November, 2026

Palermo, Italy

Tuesday, November 3

(at Palazzo Reale, Sala Piersanti Mattarella)

Tuesday, November 3	9:00-13:00	REGISTRATION at conference desk at the **NH Palermo Hotel**
	from 15:00	REGISTRATION at conference desk at the **Palazzo Reale**
	16:00-16:30	Welcome speech *(time for Authorities)* *at the Palazzo Reale, Sala Piersanti Mattarella*
	Session 1 – Rare-earths in the past and future Chairs: Maria Luisa Saladino, Dariusz Hreniak	
	16:30-17:00	KL-1 – **Antonella Maggio** (University of Palermo, Italy) **Hidden Elements: Untangling the History, Science, and Serendipity Behind the Discovery of the Rare Earths**
	17:00-17:25	I-1 – **Kevin Bernot** (Institut des Sciences Chimiques de Rennes (ISCR), France) **Responsible use of rare earth elements throughout their life cycle: the 2025 CNRS expertise**
	17:25-17:50	I-2 – **Aleksandra Lobnik** (University of Maribor, Slovenia) **Adsorption of rare earth metals from wastewater by nanomaterials**
	17:50-19:00	**Welcome reception with Light Refreshments**

Wednesday, November 4 *(at NH Palermo Hotel)*

Wednesday, November 4		**Session 2a – Optical properties of rare-earth compounds** **Chairs: Artur Bednarkiewicz, Marco Bettinelli**
	from 8:00	REGISTRATION at conference desk at the **NH Palermo Hotel**
	9:00-9:20	I-3 – **Lingdong Sun** (Peking University, China) **Boost Multiphoton Emission of Rare Earth Doped Nanoparticles**
	9:20-9:40	I-4 – **Przemysław Dereń** (Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland) **Upconversion Phosphors for Solar-Driven UVC Generation and Disinfection Applications**
	9:40-10:00	I-5 – **Jumpei Ueda** (Japan Advanced Institute of Science and Technology, Japan) **Compositional Engineering of Novel Garnet Host for Advanced Ce^{3+} Phosphors**
	10:00-10:15	O-1 – **Andris Antuzevics** (University of Latvia, Latvia) **Charge Trapping and Recombination Luminescence in Pr^{3+}-Doped Strontium Phosphates**
	10:15-10.30	O-2 – **Marcin Nyk** (Wroclaw University of Science and Technology, Poland) **Structure engineering and nonlinear optical properties of advanced colloidal nanomaterials for two-photon-based substance detection and labeling**
	10:30-10:45	O-3 – **Giulia Quaglia** (University of Perugia, Italy) **Multicolour persistent luminescence in nanostructured Eu^{3+}-doped calcium silicate phosphors**
	10:45-11:00	O-4 – **Dagmara Stefanowska** (University of Wrocław, Poland) **Structural Drivers of Dodecahedral vs. Octahedral Site Occupation for Lanthanide Activators in Garnet Hosts**
	11:00-11:20	**COFFEE BREAK 1**
		Session 2b – Optical properties of rare-earth compounds **Chairs: Przemysław Dereń, Lingdong Sun**
	11:20-11:40	I-6 – **Henning A. Höppe** (Augsburg University, Germany) **On Electronegativities of the Rare-Earth Elements Based on Relative Valence Electron Binding Energies (ReVEBE)**
	11:40-12:00	I-7 – **Mikhail G. Brik** (University of Tartu, Estonia) **A_2XY_6 compounds: structure, properties, optical applications**
	12:00-12:20	I-8 – **Andrei Racu** (National Institute of Research and Development for Electrochemistry and Condensed Matter, INCEMC, Romania) **Structure–optical properties correlations in lanthanide-doped host materials: perspectives for data-driven predictions**

	12:20-12:40	I-9 – **Chen Hu** (Shanghai Institute of Ceramics, Chinese Academy of Sciences, China) **Influence of alkaline-earth metals co-doping on scintillation properties of LuAG:Ce ceramic scintillator**
	12:40-13:00	I-10 – **Jian Xu** (Kyoto University, Japan) **Eu^{2+}-Activated Hafnate Perovskites for Pressure and Temperature Sensing**
	13:00-13:10	SO-1 – **Diego Sali** (Bruker Italia, Italy) – Sponsor **From Phonons to Function: Advanced Spectroscopy of Rare Earth Compounds**
	13:10-13:20	SO-2 – **Agnieszka Sozańska** (Renishaw) – Sponsor **Multimodal Raman solutions for the characterisation of rare earth materials and critical raw material systems**
	13:20-13:30	SO-3 – **Michele Duarte Tonet** (Edinburgh Instruments, UK) – Sponsor **Luminescence Spectroscopy of Rare Earths**
	13:30-14:30	**LUNCH 1**
	Session 2c – Optical properties of rare-earth compounds Chairs: Henning A. Höppe, Jumpei Ueda	
	14:30-14:50	I-11 – **Eugeniusz Zych** (University of Wrocław, Poland) **Pr^{3+}-Activated Garnets for Ultra-Wide Temperature Range Luminescence Thermometry**
	14:50-15:10	I-12 – **Joaquin Fernandez** (Donostia International Physics Center, Spain) **UV-activated energy transfer processes in Bi- and/or Eu-doped $GdVO_4$ studied by ultrafast spectroscopy**
	15:10-15:25	O-5 – **Miroslav Kucera** (Charles University, Czech Republic) **Compositional engineering of Ce-doped garnet scintillators**
	15:25-15:40	O-6 – **Mu-Huai Fang** (Academia Sinica, Taiwan) **Infrared Emission Transformation between NIR and SWIR via Simultaneous Thermal and Pressure Regulation**
	15:40-15:55	O-7 – **Yuuki Kitagawa** (National Institute of Advanced Industrial Science and Technology (AIST), Japan) **Luminescence Properties of Ce^{3+} in Fluorosulfide Coordination**
	15:55-16:10	O-8 – **Vitezslav Jary** (Institute of Physics of the Czech Academy of Sciences, Czech Republic) **Scintillation and spectroscopical properties of Ce/Dy doped tellurite glasses from UV to IR spectral range**
	16:10-16:25	O-9 – **Małgorzata Misiak** (Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland) **Low phonon chloride nanoparticles doped with lanthanide ions**
	16:25-16:45	**COFFEE BREAK 2**

	Session 2d – Optical properties of rare-earth compounds Chairs: Jian Xu, Eugeniusz Zych	
	16:45-17:05	I-13 – **Jiang Li** (Shanghai Institute of Ceramics, Chinese Academy of Sciences, SICCAS, China) **Fabrication and properties of GOS:Tb scintillation ceramics for high resolution neutron imaging**
	17:05-17:20	O-10 – **Yuri Zorenko** (Kazimierz Wielki University in Bydgoszcz/Centum Onkologii w Bydgoszczy, Poland) **Continued Progress in Luminescence Studies of Ce^{3+} Dopants in Single Crystals and Single-Crystalline Phosphors Using Synchrotron Radiation**
	17:20-17:35	O-11 – **Tianyuan Zhou** (Jiangsu Normal University, China) **High-performance Ce,Nd:YAG and Cr,Nd:YAG transparent ceramics for solar pumped solid state lasers**
	17:35-17:50	O-12 – **Le Zhang** (Jiangsu Normal University, China) **Fine Structure Control of YAG Based Ceramics for High-power Solid State Lighting Applications**
	17:50-18:05	O-13 – **Guna Doke** (University of Latvia, Latvia) **From Solar-Blind UV to Night-Vision NIR: Invisible Persistent Luminescence for Advanced Optical Applications**
	18:05-18:20	O-14 – **Khadija Kaaroud** (Ghent University, Belgium) **Revisiting the reported red emission in europium doped $CaYGaO_4$: Evidence for a $CaS:Eu^{2+}$ impurity phase**
	18:20-18:35	O-15 – **Anna Lucia Pellegrino** (University of Catania, Italy) **Tailoring Lanthanide-Doped Fluoride Thin Films: A Comprehensive Study on MOCVD and Sol-Gel Synthesis Routes and Luminescence Properties**
	18:35	**Poster Session**
	19:30 **21:30**	**BANQUET** **Performance by the Marsala Antica Folk Group**

Thursday, November 5

(at NH Palermo Hotel)

Thursday, November 5	**Session 3 – Rare-earth magnetic materials Chairs: Kevin Bernot , Anna Gągor**	
	9:00-9:30	KL-2 – **Mauro Perfetti** (University of Florence, Italy) **Functional magnetic molecular materials**
	9:30-9:50	I-14 – **Szymon Chorąży** (Jagiellonian University, Poland) **Lanthanide Polycyanidometallate Coordination Compounds: From Luminescent Molecular Nanomagnets to Extended Multifunctionality**
	9:50-10:10	I-15 – **Stergios Piligkos** (University of Copenhagen, Denmark) **Lanthanide Coordination Complexes for Quantum Technologies**
	10:10-10:30	I-16 – **Jérôme Long** (Université de Montpellier, France) **The Bright Side of Ln^{3+}-Single-Molecule Magnets: A New Frontier in Magneto-Optical Materials**
	10:30-10:50	I-17 – **Alexander Omelyanchik** (University of Genova, Italy) **Rare-Earth-based Magnetic Materials: Sustainable Recycling, Processing, and Functional Composites**
	10:50-11:05	O-16 – **Leonardo Tacconi** (University of Florence, Italy) **Toward Electric-Field Tunable Molecular Spins: Anisotropic Spin-Electric Coupling in Dy(III)**
	11:05-11:20	O-17 –**Jakub Zakrzewski** (The University of Tokyo, Japan) **Optical detection of spin-state switching through luminescent photochromism in heterometallic d-f networks based on lanthanides and photomagnetic cyanido metal complexes**
	11:20-11:35	O-18 – **Davide Peddis** (Università Di Genova, Italy) **Interface Engineering of Ferrite Nanocomposites for Rare-Earth-Free Permanent Magnets and Emerging Magnetic Information Technologies**
	11:45-18:00	**EXCURSION (including LUNCH 2 out - at ~13:00)**
19:30		**DINNER 1**

Friday, November 6

(at NH Palermo Hotel)

Friday, November 6	**Session 4a – Rare-earth-recovery, chemical speciation and solution properties Chairs: Clemente Bretti, Alberto Pettignano**	
	9:00-9:30	KL-3 – **Andrea Melchior** (University of Udine, Italy) **Extraction of rare earths elements from aqueous solutions: fundamentals and applications**
	9:30-9:50	I-18 – **Maria Rosa Beccia** (Université Côte d'Azur, France) **Europium Speciation and Bioaccumulation in *Ascophyllum nodosum*: Mechanistic Insights into Lanthanide Behavior in Marine Systems**
	9:50-10:10	I-19 – **Gabriele Lando** (University of Messina, Italy) **Bergamot Pomace as a Biosorbent for Rare Earths: Outcomes of the Wastezilla Project**
	10:10-10:25	O-19 – **Marianna Guagliano** (Politecnico di Milano, Italy) **Biochar in solid/liquid adsorption process of Rare Earths (Nd, Y, La)**
	10:25-10:40	O-20 – **Giovani Pavoski** (University of Sao Paulo, Brazil) **Nanohydrometallurgy for selective separation of rare earth elements**
	10:40-10:55	O-21 – **Maurizio Bellotto** (OPIGEO Srl, Italy) **Adsorption of Rare Earths (Y, La, Nd, Sm) form leached solutions onto alkali-activated materials**
	10:55-11:20	**COFFEE BREAK 3**
	Session 4b – Rare-earth-recovery, chemical speciation and solution properties Chairs: Maria Rosa Beccia, Demetrio Milea	
	11:20-11:40	I-20 – **Přemysl Lubal** (Masaryk University, Czech Republic) **The molecular design of tetraazamacrocylic ligands for detection and analysis of Ln(III) ions**
	11:40-12:00	I-21 – **Snežana Papović** (University of Novi Sad, Serbia) **Tailoring the Properties of Ionic Liquids for Targeted Applications**
	12:00-12:20	I-22 – **Eleonora Macedi** (University of Urbino, Italy) **Rare Earth Elements: from binding to sensing and recovery**
	12:20-12:40	I-23 – **Patrick Zhang** (Florida Polytechnic University, USA) **From Waste Piles to Supply Chain: Overcoming the Economic and Regulatory Hurdles to Rare Earths Recovery from Florida Phosphogypsum**
	12:40-12:55	O-22 – **Davide Lascari** (University of Palermo) **Valorization of agricultural waste: turning Opuntia ficus-indica cladodes and Prunus dulcis hulls into Nd^{3+} adsorbents**
	12:55-14:00	**LUNCH 3**

Session 5a – Advanced applications Chairs: Szymon Chorąży, Fabio Piccinelli		
Friday, November 6	14:00-14:30	KL-4 – **Lorenzo Di Bari** (University of Pisa, Italy) **Chiroptical activity of lanthanide(III) ions**
	14:30-14:50	I-24 – **Robert Pal** (Durham University, UK) **Recent advancements in CPL instrumentation and bright CPL emitting molecular engineering**
	14:50-15:10	I-25 – **Flavia Artizzu** (University of Eastern Piedmont "A. Avogadro", Italy) **Lanthanide-mediated photophysical dynamics in antenna ligands for quantum optics, white light emission and molecular photoswitching**
	15:10-15:30	I-26 – **Gianni Gallello** (Valencia University, Spain) **The Standardization of REE Patterns to Interpret Anthropogenic Features in Archaeological Contexts**
	15:30-15:45	O-23 – **Elisa I. Garcia-Lopez** (University of Palermo, Italy) **Rare-Earth-Modified TiO_2 photocatalysts: From Ce loaded Bio-Templated materials to Lanthanide Phthalocyanine-Sensitized systems**
	15:45-16:00	O-24 – **Stefan Lis** (Adam Mickiewicz University in Poznań Poland) **Almost half a century of my fascination with rare earth compounds and their luminescence spectroscopy**
	16:00-16:15	O-25 – **Artur Bednarkiewicz** (Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland) **Photon Avalanche in nano and microcrystals for sensing and imaging**
	16:15-16:30	O-26 – **Miao Liu** (Institut National de la Recherche Scientifique, Canada) **Short-wave infrared photoluminescence lifetime imaging microscopy for rare-earth doped nanoparticles**
	16:30-16:50	**COFFEE BREAK 4**
	Session 5b – Advanced applications Chairs: Wiesław Stręk, Dagmara Stefańska	
	16:50-17:10	I-27 – **Leonid Vasylechko** (Lviv Polytechnic National University, Ukraine) **Europium sulphides EuS_{2-x} and Eu_3S_4: in-depth study of crystal structures and thermal behaviour**
	17:10-17:30	I-28 – **Riccardo Marin** (Universidad Autónoma de Madrid, Spain) **Lanthanide ions and their many faces in luminescence thermometry**
	17:30-17:50	I-29 – **Ramūnas Skaudžius** (Vilnius University, Lithuania) **Development of multifunctional wood–ceramic composites: structural integration and property enhancement via $GdPO_4 \cdot H_2O:Eu^{3+}$ nanoparticles**
	17:50-18:05	O-27 – **Tingsong Li** (Chinese Academy of Sciences, China) **Fabrication and characterizations of Eu^{2+}-Dy^{3+} co-doped $SrAl_2O_4$ ceramics with persistent luminescence**

	18:05-18:20	O-28 – **Justyna Zeler** (University of Wrocław, Poland) **Phosphor Design for Thermal Tracking via Thermoluminescence and Radioluminescence**
	18:20-18:35	O-29 – **Roberto Bondi** (University of Perugia, Italy) **Persistent Luminescence inks for textiles: an innovative solution for the production of a smart material**
	18:35-18:50	O-30 – **Leonardo Ceccon** (University of Verona, Italy) **Shedding Light on PFAS: A Lanthanide-Based Optical Sensing Approach**
	18:50-19:00	**CLOSING CEREMONY**
	19:30	**DINNER 2**

Saturday, November 7

9:00-17:00 - Excursion to Erice (Trapani) and Ettore Majorana Foundation and Centre for Scientific Culture ETS

https://www.erice.org/ https://ettoremajoranafoundation.com/en/

on request, not included in the registration fee