



ACCADEMIA NAZIONALE DEI LINCEI E FONDAZIONE «GUIDO DONEGANI»  
INTERNATIONAL CONFERENCE

## CHALLENGES WITH RARE EARTH ELEMENTS: THE PERIODIC TABLE AT WORK FOR NEW SCIENCE & TECHNOLOGY

Rome, 14 - 15 November, 2019

*Organizing committee:* Silvio AIME (Chair), Paolo ASCENZI, Gennaro MARINO,  
Roberta SESSOLI (Chair), Adriano ZECCHINA

### PROGRAMME

#### Thursday, 14 November

- 14.00 Welcome address by the Fondazione Donegani  
14.15 Silvio AIME (Linceo, Università di Torino): Opening/ Aims of the workshop  
14.30 Jean-Claude BÜNZLI (EPFL, Lausanne, and University of Technology, Sydney, and Hong Kong Baptist University): *The amazing contribution of rare earths to science and technology*  
15.00 Peter HANDLEY (European Commission, Head of the Unit on raw materials, metals, Bruxelles): *Rare Earths and critical raw materials for industrial value chains in the EU*  
15.30 Stefano POLI (Linceo, Università di Milano): *REE in the Earth's mantle and crust: the origin of RE minerals and ore deposits*  
16.00 Coffee break  
16.30 Lorenzo SORACE (Università di Firenze): *Magnetic properties for innovative applications of Lanthanide-based materials*  
17.00 Marco BETTINELLI (Università di Verona): *Luminescent Rare Earth-based materials and their optical applications*  
17.30 Lorenzo DI BARI (Università di Pisa): *When mirror symmetry breaks: the wonderland of chiral lanthanide complexes*  
18.00 Flash presentation and discussion of posters

#### Friday, 15 November

- 9.30 Sabrina CONOCI (ST Microelectronics - Università di Messina): *Lanthanide based materials in electronics industry*  
10.00 Adriano ZECCHINA (Linceo, Università di Torino): *Rare Earths in heterogenous and homogenous catalysis: a review*  
10.30 Teodora RETEGAN (Chalmers University of Technology, Göteborg): *Challenges of recycling REEs from electrical and electronic waste, the overall perspective*  
11.00 Coffee break  
11.30 Claudio LUCHINAT (Università di Firenze): *Lanthanoids as structural probes in biology*  
12.00 Alberto BOFFI (Sapienza Università di Roma): *Lanthanide binding tags in proteins*  
12.30 Giovanna DE SIMONE (Università di Roma Tre): *Lanthanide-based enzymology*  
14.00 Mauro BOTTA (Università del Piemonte Orientale, Alessandria): *Lanthanides & magnetic resonance imaging*  
14.30 Henrick MEI (Deutsches Reuma-Forschungszentrum, Berlin): *Single cell analyses of the immune system by mass cytometry - cellular diversity and biosignatures in rheumatic inflammation*  
15.00 Emilio MARENGO (Università del Piemonte Orientale, Alessandria): *The role of Lanthanides in foostuffs traceability and authentication*  
15.30 General discussion  
16.00 Roberta SESSOLI (Linceo, Università di Firenze): Closing Remarks

ROMA - PALAZZO CORSINI - VIA DELLA LUNGARA, 10

*La partecipazione al convegno è libera, fino ad esaurimento dei posti disponibili. Si prega di segnalare la presenza*  
*Segreteria del convegno: piemontese@lincei.it - [www.lincei.it](http://www.lincei.it)*

Fino alle ore 10 è possibile l'accesso da Lungotevere della Farnesina, 10