

**150° INTERNATIONAL YEAR OF THE PERIODIC TABLE OF CHEMICAL ELEMENTS**

**AVOGADRO COLLOQUIA 2019**

**Elements of the Periodic Table for Energy**

**ROME, CNR, SALA MARCONI  
17<sup>th</sup>-18<sup>th</sup> DECEMBER, 2019**

*Organizing and Scientific Committee:* Maurizio PERUZZINI (CHAIR), Federico BELLA, Silvia BORDIGA, Luigi MONDELLO, Stefano MORO, Augusta Maria PACI, Fabrizio PASSARINI, Roberta SESSOLI, Emilia SICILIA, Barbara SPADONI.

**Day 1 14.00-evening**

14.00 Opening ceremony by Massimo INGUSCIO (CNR President) and Angela AGOSTIANO (SCI President)

**ELEMENTS OF THE PERIODIC TABLE IN ENERGY PRODUCTION:**

Chair: Maurizio PERUZZINI

14.30 - 15.00 Anders HAGFELDT (Ecole Polytechnique Fédérale de Lausanne, CH)

15.00 - 15.20 Simona BINETTI (Università degli Studi di Milano-Bicocca, IT)

15.20 - 15.40 Claudia BAROLO (Università degli Studi di Torino, IT)

15.40 - 16.00 Question time

16.00 - 17.00 Coffee break with e-Poster session

**ELEMENTS OF THE PERIODIC TABLE IN ENERGY STORAGE:**

Chair: Gaetano GUERRA

17.00 - 17.30 Kristina EDSTRÖM (Uppsala Universitet, SE)

17.30 - 17.50 Francesco BONACCORSO (Istituto Italiano di Tecnologia, IT)

17.50 - 18.20 Clare GREY (University of Cambridge, UK)

18.20 - 18.30 Question time

18.30 DINNER

**Day 2 09.00-13.30**

**ELEMENTS OF THE PERIODIC TABLE IN ENERGY SAVING AND RECYCLING:**

Chair: Raffaele RICCIO and Angela AGOSTIANO

09.00 - 09.30 Marc FONTECAVE (College de France, FR)

09.30 - 09.50 Fabrizio CAVANI (Alma Mater Studiorum - Università di Bologna, IT)

09.50 - 10.10 Vincenzo PALERMO (Consiglio Nazionale delle Ricerche, IT)

10.10 - 11.00 Coffee break with e-Poster session

11.00 - 12.00 Question time, "Best poster" Award promoted by SCI and Final Remarks

12.00 - 12.45 Pietro GRECO (scientific journalist – talk for schools students, *in Italian*)

12.45 - 13.00 Question time

13.00 - 13.30 "W At C H the elements: la Tavola Periodica vista dai giovani" SCI-PLS Award

13.30 Closing

**Conference Secretariat:** [segreteria@soc.chim.it](mailto:segreteria@soc.chim.it)

**Registration required:** [Here](#)

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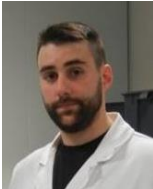



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**INVITED EARLY-CAREER RESEARCHERS**

*will present e-posters on their most recent scientific outcomes*

<p><b>Francesco Barzagli</b> CNR – ICCOM Researcher <a href="mailto:francesco.barzagli@iccom.cnr.it">francesco.barzagli@iccom.cnr.it</a></p>	<p><i>From CO<sub>2</sub> capture to the synthesis of useful chemicals: low energy consumption methods for carbon recycling</i></p>	
<p><b>Linda Bergamini</b> CNR – ISTECC PhD student <a href="mailto:linda.bergamini@istec.cnr.it">linda.bergamini@istec.cnr.it</a></p>	<p><i>All-inorganic perovskites for solar conversion</i></p>	
<p><b>Chiara Liliana Boldrini</b> Università degli Studi di Milano-Bicocca Post-doc researcher <a href="mailto:chiara.boldrini@unimib.it">chiara.boldrini@unimib.it</a></p>	<p><i>Deep eutectic solvents in ecofriendly electrolytes in dye sensitized solar cells: producing electricity with your cupboard foodstuff</i></p>	
<p><b>Luca Ciacci</b> Alma Mater Studiorum – Università di Bologna Post-doc researcher <a href="mailto:luca.ciacci5@unibo.it">luca.ciacci5@unibo.it</a></p>	<p><i>The anthropogenic copper cycle – Flows, stocks and greenhouse gas emissions scenarios to 2050</i></p>	
<p><b>Francesca Colò</b> Politecnico di Torino Post-doc researcher <a href="mailto:francesca.colo@polito.it">francesca.colo@polito.it</a></p>	<p><i>Sodium, a key element of the futuristic energy storage from renewables</i></p>	
<p><b>Francesca De Giorgio</b> Startup Bettery Srl, Spin-off of the Alma Mater Studiorum – Università di Bologna President and Legal representative <a href="mailto:francesca.degiorgio@bettery.eu">francesca.degiorgio@bettery.eu</a></p>	<p><i>Advanced, next generation lithium batteries: from the idea to the knowledge technology transference</i></p>	

<p><b>Alessio Dessì</b> CNR – ICCOM Post-doc researcher <a href="mailto:a.dessi@iccom.cnr.it">a.dessi@iccom.cnr.it</a></p>	<p><i>Design and synthesis of organic photosensitizers for energy and hydrogen production</i></p>	
<p><b>Chiara Ferrara</b> Università degli Studi di Milano-Bicocca Assistant professor <a href="mailto:chiara.ferrara@unimib.it">chiara.ferrara@unimib.it</a></p>	<p><i>Exploring structure-properties relationships in materials for energy storage</i></p>	
<p><b>Sheng Gao</b> CNR – ISOF PhD student <a href="mailto:sheng.gao@isof.cnr.it">sheng.gao@isof.cnr.it</a></p>	<p><i>Luminescent solar concentrators based on highly luminescent benzoheterodiazole dyes with large Stokes' shifts</i></p>	
<p><b>Daniele Giusi</b> Università degli Studi di Messina PhD student <a href="mailto:dgiusi@unime.it">dgiusi@unime.it</a></p>	<p><i>Role of Cu(I) in addressing selectivity of CO<sub>2</sub> reduction by electrocatalytic or photocatalytic route</i></p>	
<p><b>Luca Guglielmero</b> Università di Pisa PhD student <a href="mailto:luca.guglielmero@gmail.com">luca.guglielmero@gmail.com</a></p>	<p><i>Ionic liquids as suitable electrolytes for non-aqueous vanadium redox flow batteries: a first insight</i></p>	
<p><b>Enrico Lamanna</b> Università degli Studi di Roma "Tor Vergata" PhD student <a href="mailto:enrico.lamanna@uniroma2.it">enrico.lamanna@uniroma2.it</a></p>	<p><i>2-terminal mechanically stacked perovskite/silicon tandem solar cells</i></p>	
<p><b>Lucia Mazzapioda</b> Università degli Studi di Roma "La Sapienza" PhD student <a href="mailto:lucia.mazzapioda@uniroma1.it">lucia.mazzapioda@uniroma1.it</a></p>	<p><i>Perovskite titanate as electrode component for direct methanol fuel cells (DMFCs)</i></p>	
<p><b>Daniele Meggiolaro</b> IIT Post-doc researcher <a href="mailto:daniele.meggiolaro@iit.it">daniele.meggiolaro@iit.it</a></p>	<p><i>Defects and polarons in lead halides perovskites: a computational perspective</i></p>	
<p><b>Dario Mosconi</b> Università degli Studi di Padova Post-doc researcher <a href="mailto:dario.mosconi@unipd.it">dario.mosconi@unipd.it</a></p>	<p><i>Highly efficient MoS<sub>2</sub>/Ag<sub>2</sub>S/Ag photoelectrocatalyst obtained from a recycled DVD surface</i></p>	

<p><b>Maria Vincenza Pagliaro</b>  CNR – ICCOM  PhD student  <a href="mailto:mpagliaro@iccom.cnr.it">mpagliaro@iccom.cnr.it</a></p>	<p><i>Palladium-ceria catalysts with enhanced alkaline hydrogen oxidation activity for anion exchange membrane fuel cells</i></p>	
<p><b>Mario Prejanò</b>  Università della Calabria  Post-doc researcher  <a href="mailto:mario.prejano@unical.it">mario.prejano@unical.it</a></p>	<p><i>Iron catalyzed reversible hydrogenation/dehydrogenation between CO<sub>2</sub> and formic acid. Insights from computations</i></p>	
<p><b>Francesco Rigodanza</b>  Università degli Studi di Padova  Post-doc researcher  <a href="mailto:francesco.rigodanza@gmail.com">francesco.rigodanza@gmail.com</a></p>	<p><i>Supramolecular quantasome for artificial synthesis</i></p>	
<p><b>Federico Rossi</b>  Università degli Studi di Siena  PhD student  <a href="mailto:fe.rossi@unifi.it">fe.rossi@unifi.it</a></p>	<p><i>Environmental profile of manufacturing and use phases of different types of batteries</i></p>	
<p><b>Eduardo Schiavo</b>  Università degli Studi di Napoli “Federico II”  PhD student  <a href="mailto:eduardo.schiavo@unina.it">eduardo.schiavo@unina.it</a></p>	<p><i>CO<sub>2</sub> adsorption and activation on CuFeO<sub>2</sub> delafossite photoelectrode, new insights from first-principles calculations</i></p>	
<p><b>Matteo Signorile</b>  Università degli Studi di Torino  Post-doc researcher  <a href="mailto:matteo.signorile@unito.it">matteo.signorile@unito.it</a></p>	<p><i>Copper-based materials for methane oxidation</i></p>	
<p><b>Leonardo Triggiani</b>  CNR – IPCF  Post-doc researcher  <a href="mailto:l.triggiani@ba.ipcf.cnr.it">l.triggiani@ba.ipcf.cnr.it</a></p>	<p><i>Hot-exciton ultrafast dynamics in all-inorganic perovskite nanocrystals</i></p>	
<p><b>Qian Wang</b>  Università degli Studi di Trieste  PhD student  <a href="mailto:buctwangq@163.com">buctwangq@163.com</a></p>	<p><i>Interfacial structure-determined reaction pathway and selectivity for 5-hydroxymethyl furfural hydrogenation over Cu-based catalysts</i></p>	