

## Sunday July 18

- 14:00 Registration opens
- 14:00 **Putting up posters**  
*Posters will be on display during the entire duration of the meeting*
- 16:30 **Welcome drink**
- 18:00 *Conference Opening Lecture*  
**Ludger Wöste**  
Freie Universität Berlin, Germany  
*48 Years of Research on Metal Clusters*
- Reception**

## Monday July 19

### MoAM1 *Chair: Armin Kleibert*

- 8:30 Welcome by **Martin Hof**, Director of J. Heyrovský Institute of Physical Chemistry, Czech Republic
- 8:40-9:10 IL01 **Marc Willinger**  
ETH Zürich, Switzerland  
*The dynamic behaviour of active catalysts revealed by multi-scale in-situ electron microscopy*
- 9:10-9:30 IHT01 **Yoshie Murooka**  
Forschungszentrum Jülich, Germany  
*Technical developments for light and high frequency excitations in transmission electron microscopy*
- 9:30-9:50 HT01 **Jaroslav Kočíšek**  
Po24 J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Butadiene clusters as a model for nanoelectrets*
- 9:50-10:00 Discussion of the session
- 10:00-10:30 **Coffee Break**

### MoAM2 *Chair: Kersti Hermansson*

- 10:30-10:50 IHT02 **Ingo Barke**  
University of Rostock, Germany  
*Virtual plasmonic dimers and local excitation of electron-hole systems on silicon and molecule aggregates by means of particle plasmons*
- 10:50-11:10 HT02 **Vladimíra Petráková**  
Po36 J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Controlled assembly of plasmonic nanoparticles and fluorophores for sub-diffraction manipulation of light*
- 11:10-11:40 IL02 **Karl-Heinz Meiwes-Broer**  
University of Rostock, Germany  
*Cresting the coulomb barrier of polyanionic silver clusters*
- 11:40-11:50 Discussion of the session
- 12:00-13:30 **Lunch**



## Monday July 19

**MoPM1**

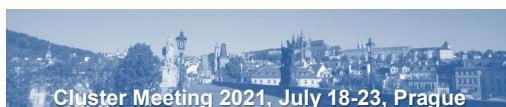
Chair: Ingo Barke

- 13:30-13:50 HT03 **Mayara da Silva Santos**  
Po06 Helmholtz-Zentrum Berlin für Material und Energie GmbH, Germany  
*High-resolution X-ray absorption spectroscopy in a cryogenic ion trap as a tool to investigate 3d metal–oxygen bonds*
- 13:50-14:20 IL03 **María Pilar de Lara-Castells**  
AbinitSim Unit/CSIC, Spain  
*First-principles modelling of subnanometer-sized catalysts and photo-catalysts: TiO<sub>2</sub>-supported coinage metal clusters as case studies*
- 14:20-14:50 IL04 **Anatoly Frenkel**  
Stony Brook University, United States  
*Decoding reactive structures in catalytic clusters hidden in their X-ray absorption spectra*
- 14:50-15:00 Discussion of the session
- 15:00-15:30 **Coffee Break**

**MoPM2**

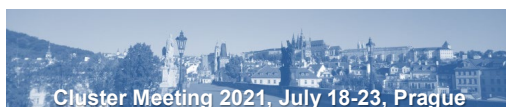
Chair: Karl-Heinz Meiwes-Broer

- 15:30-15:50 HT04 **Liana Socaciu-Siebert**  
Po46 SPECS Surface Nano Analysis GmbH, Germany  
*Routine operando studies with Near Ambient Pressure - XPS*
- 15:50-16:10 IHT03 **Stephan Bartling**  
Leibniz Institute for Catalysis, Germany  
*A near ambient pressure XPS setup and a nanofluidic reactor device for operando gas phase catalysis*
- 16:10-16:30 HT05 **Zdeněk Jakub**  
Po19 CEITEC, Czech Republic  
*Adsorbate-induced structural evolution changes the mechanism of CO oxidation on a Rh/Fe<sub>3</sub>O<sub>4</sub>(001) model catalyst*
- 16:30-16:40 Discussion of the session
- 16:40-18:00 *Flash talks – Posters with odd numbers*
- 18:00-21:00 **Poster Session I**  
*Posters with **odd numbers***  
*Poll for best posters of this session*



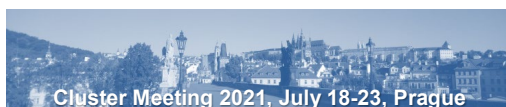
## Tuesday July 20

|                  |              |  |
|------------------|--------------|--|
| <b>TuAM1</b>     |              | <i>Chair: Marc Willinger</i>   |
| 8:30-9:00        | IL05         | <b>Armin Kleibert</b><br>Paul Scherrer Institut, Switzerland<br><i>Oxide shell growth kinetics and magnetism of cobalt nanoparticles during early stage oxidation</i>  |
| 9:00-9:20        | HT06<br>Po09 | <b>Veronique Dupuis</b><br>Institut Lumiere Matiere, France<br><i>Nanomagnets elaborated by Mass-Selected Low Energy Cluster Beam Deposition</i>   |
| 9:20-9:40        | IHT04        | <b>Chao Zhang</b><br>Uppsala University, Sweden<br><i>Modelling protonic double layer at metal oxide-electrolyte interfaces</i>  |
| 9:40-9:45        |              | <i>Sponsor flash – Gustavo Santiso Quinones</i><br><i>The nanocrystallography revolution: Eldico Scientific's novel 3D ED device</i>   |
| 9:45-10:00       |              | Discussion of the session  |
| 10:00-10:30      |              | <b>Coffee Break</b>  |
| <br><b>TuAM2</b> |              | <br><i>Chair: Claude Henry</i>   |
| 10:30-11:00      | IL06         | <b>Vlasta Bonačić-Koutecký</b><br>Humboldt Universität Berlin/University of Split, Croatia<br><i>Concepts guiding joint theoretical and experimental approaches from catalysis to bioimaging</i>   |
| 11:00-11:20      | HT07<br>Po16 | <b>Andreas Hauser</b><br>Graz University of Technology, Austria<br><i>Mixed-method and artificial intelligence-enhanced strategies toward the modelling of metallic nanostructures</i>   |
| 11:20-11:40      | HT16<br>Po52 | <b>Kevin Rossi</b><br>Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland<br><i>A Next-Gen site-counting method to link size, shape, and activity of metallic nanocatalysts for the electrochemical reduction of small molecules</i> |
| 11:40-11:50      |              | Discussion of the session  |
| 12:00-13:30      |              | <b>Lunch</b>   |



## Tuesday July 20

|              |                                     |  |
|--------------|-------------------------------------|--|
| <b>TuPM1</b> | <i>Chair: Noelia Barrabés</i>       |  |
| 13:30-14:00  | IL08                                | <b>Claude Henry</b><br>CINaM CNRS/Aix-Marseille University, France<br><i>Reactivity of regular arrays of Pd clusters supported on a nanostructured alumina thin film: from nanoparticles, clusters to single atoms</i> |
| 14:00-14:30  | IL09                                | <b>Alessandro Fortunelli</b><br>CNR-ICCOM, Istituto di Chimica dei Composti Organometallici, Italy<br><i>Theoretical approaches to nanocluster catalysis</i>   |
| 14:30-14:50  | HT08<br>Po20                        | <b>Ewald Janssens</b><br>KU Leuven, Belgium<br><i>Methanol dehydrogenation by cationic vanadium clusters</i>   |
| 14:50-15:00  |                                     | Discussion of the session  |
| 15:00-15:30  |                                     | <b>Coffee Break</b>  |
|              |                                     |  |
| <b>TuPM2</b> | <i>Chair: Alessandro Fortunelli</i> |  |
| 15:30-15:50  | IHT05                               | <b>Christopher Heard</b><br>Charles University in Prague, Czech Republic<br><i>Stabilization, migration and sintering of zeolite- encapsulated metal clusters</i>  |
| 15:50-16:20  | IL10                                | <b>Scott Anderson</b><br>University of Utah, United States<br><i>Cluster model catalysts: improved stability, size-selected electrocatalysis, and single cluster/atom electrocatalysis</i>                             |
| 16:20-16:50  | IL11                                | <b>Anastassia Alexandrova</b><br>UCLA, United States<br><i>Dynamic fluxionality and metastable nature of active sites of supported cluster catalysts</i>   |
| 16:50-17:20  | IL12                                | <b>Nuria López</b><br>Institute of chemical Research of Catalonia, Spain<br><i>Speciation in low-nuclearity catalysts: the frontier to robust structure-activity relationships</i>                                     |
| 17:20-17:30  |                                     | Discussion of the session  |
| 18:00-22:00  |                                     | <b>Conference Dinner</b>   |
| 18:00        |                                     | Departure by bus from Conference venue/Clarion hotel to the Castle Liblice<br><br><i>Return to Prague around 22:00</i>   |



### Wednesday July 21

**WeAM1** Chair: Ewald Janssens

- 8:30-8:50 IHT06 **Detre Teschner**  
Max-Planck-Institute for Chemical Energy Conversion, Germany  
*Key role of chemistry versus bias in electrocatalytic oxygen evolution*
- 8:50-9:20 IL13 **Noelia Barrabés**  
Institute of Materials Chemistry / TU-Wien, Austria  
*Atomically designed catalysts by bimetallic metal nanoclusters: insights into the structure dynamics by operando spectroscopy*
- 9:20-9:50 IL14 **Angelika Brückner**  
Leibniz-Institut für Katalyse, Germany  
*Impact of synthesis and test conditions on nanostructure and electron transfer in Pt/metal sulfide/C<sub>3</sub>N<sub>4</sub> semiconductors during photocatalytic H<sub>2</sub> production*
- 9:50-10:00 Discussion of the session
- 10:00-10:30 **Coffee Break**

**WeAM2** Chair: Ulrike Diebold

- 10:30-11:00 IL15 **Kersti Hermansson**  
Uppsala University, Sweden  
*Size dependent oxygen chemistry of CeO<sub>2</sub> nanoparticles*
- 11:00-11:20 IL16 **Richard Palmer**  
Swansea University, United Kingdom  
*Challenges for nanoparticle deposition: predicting the catalytic performance of nanoalloys and scale-up to manufacturing*
- 11:20-11:50 IL17 **Pascal Andreatza**  
ICMN Université d'Orléans CNRS, France  
*Real-time analysis of the incorporation of Co or Ni heteroatoms into Ag clusters and vice versa*
- 11:50-12:00 Discussion of the session
- 12:00-13:30 **Lunch**
- 13:30-14:00 **Lunchtalk Štefan Vajda**  
*Introduction of the J. Heyrovský nanocatalysis program: Catalysis by nano- and subnanometer size catalysts*
- 14:00 Tour of the Nanocatalysis labs / Free Afternoon



## Thursday July 22

|              |                               |   |
|--------------|-------------------------------|---|
| <b>ThAM1</b> | <i>Chair: Pascal Andrezza</i> |   |
| 8:30-9:00    | IL18                          | <b>Panagiotis Grammatikopoulos</b><br>OIST Graduate University/ETH Zurich, Japan<br><i>Nanoparticle scaffold for multilayered Si-based Li-ion battery anodes</i>  |
| 9:00-9:30    | IL19                          | <b>Petr Krtil</b><br>J. Heyrovský Institute of Physical Chemistry, Czech Republic<br><i>Optimization of activity of electrocatalytic oxides on local level - top down and bottom up strategies in materials' design</i> |
| 9:30-10:00   | IL27                          | <b>M.A. López-Quintela</b><br>University of Santiago de Compostela, Spain<br><i>Synthesis at pilot scale</i>  |
| 10:00-10:10  |                               | Discussion of the session   |
| 10:10-10:40  |                               | <b>Coffee Break</b>   |

|              |                            |   |
|--------------|----------------------------|---|
| <b>ThAM2</b> | <i>Chair: Martin Srnec</i> |   |
| 10:40-11:00  | IHT07                      | <b>Hazar Guesmi</b><br>CNRS-ICGM-Montpellier, France<br><i>Modeling the effect of reactive gas on alloy catalysts from single-atom sites to nanoparticles of thousands of atoms</i> |
| 11:00-11:30  | IL20                       | <b>Vladimír Matolín</b><br>Charles University, Czech Republic<br><i>Hydrogen – fuel for sustainable energy</i>  |
| 11:30-12:00  | IL21                       | <b>Mauro Stener</b><br>Trieste University, Italy<br><i>Excited states and metal clusters: computational studies from optical properties to photocatalysis</i>                       |
| 12:00-12:10  |                            | Discussion of the session   |
| 12:10-13:30  |                            | <b>Lunch</b>  |



## Thursday July 22

|                  |              |  |
|------------------|--------------|--|
| <b>ThPM1</b>     |              | <i>Chair: Maria Pilar de Lara-Castells</i>   |
| 13:30-14:00      | IL22         | <b>Laurent Piccolo</b><br>IRCELYON, University of Lyon, France<br><i>Reaction-induced changes in structure and activity of supported platinum catalysts investigated in situ: from single atoms to clusters</i>    |
| 14:00-14:30      | IL23         | <b>Gareth Parkinson</b><br>TU Wien, Austria<br><i>Unravelling CO adsorption on model single-atom catalysts</i>   |
| 14:30-14:50      | IHT08        | <b>Maria J Lopez</b><br>Universidad de Valladolid, Spain<br><i>Reactivity of Pd-Cu nanoalloys towards hydrogen adsorption and dissociation</i>   |
| 14:50-15:00      |              | Discussion of the session  |
| 15:00-15:30      |              | <b>Coffee Break</b>  |
| <br><b>ThPM2</b> |              | <i>Chair: Maria J Lopez</i>  |
| 15:30-15:50      | HT10<br>Po12 | <b>Michal Fárník</b><br>J. Heyrovský Institute of Physical Chemistry, Czech Republic<br><i>Pickup and reactions of molecules on carbonaceous from the perspective of atmospheric and interstellar processes</i>    |
| 15:50-16:10      | HT11<br>Po14 | <b>Estefania German</b><br>Universidad de Valladolid, Spain<br><i>DFT study of TM<sub>6</sub> (TM: V, Co, Pd) adsorption on boron-graphdiyne layer</i>   |
| 16:10-16:30      | HT12<br>Po42 | <b>Gustavo Santiso-Quinones</b><br>Eldico Scientific AG, Switzerland<br><i>3D-ED continuous rotation method in nanocrystallography: a dedicated device for structural elucidation of nanocrystalline particles</i> |
| 16:30-16:40      |              | Discussion of the session  |
| 16:40-18:00      |              | <i>Flash talks – Posters with even numbers</i>   |
| 18:00-21:00      |              | <b>Poster Session II</b><br><i>Posters with even numbers</i><br><i>Poll for best posters of this session</i><br><i>Start of the poll for best HTs</i>  |

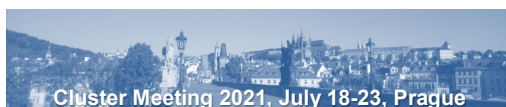
**Friday July 23****FrAM1***Chair: Laurent Piccolo*

- 8:30-8:50 HT13 **Kinga Mlekodaj**  
Po32 J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Splitting of O<sub>2</sub> at room temperature over distant binuclear transition metal centers in zeolites for direct oxidation of methane to methanol*
- 8:50-9:20 IL24 **Ulrike Diebold**  
TU Wien, Institute of Applied Physics, Austria  
*Direct assessment of the acidity of individual surface hydroxyls on oxides*
- 9:20-9:50 IL25 **Robert Schlögl**  
Fritz Haber Institute of Max Planck Society, Germany  
*On the relation between dynamics, nanostructure and catalytic activity of materials*
- 9:50-10:00 Discussion of the session
- 10:00-10:30 **Coffee Break**

**FrAM2***Chair: Christopher Heard*

- 10:30-11:00 IL26 **Martin Srnec**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*On the role of asynchronicity in C-H bond activation*
- 11:00-11:20 HT14 **Muhammad Irfan Qadir**  
Po38 J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Selective CO<sub>2</sub> hydrogenation to olefin-rich hydrocarbons driven by FeO<sub>x</sub> nanorods decorated with Cu nanoparticles*
- 11:20-11:40 HT15 **David Kubička**  
Po26 University of Chemistry and Technology Prague, Czech Republic  
*Copper clusters for environmentally friendly hydrogenolysis of esters to alcohols – effects of support properties and copper introduction method*
- 11:40-11:50 Discussion of the session
- 12:30 Announcement of Best Posters & Best Hot Topic Talks
- 12:30-13:00 **Closing event, farewell**



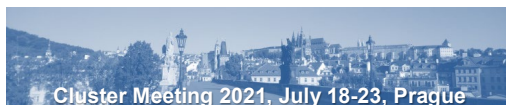


## POSTERS - MONDAY

- Po01 **Olesya Ablyasova**  
Helmholtz-Zentrum Berlin für Materialien und Energie, Germany  
*XAS study of electronic structure of cold gas-phase manganese oxide clusters*
- Po03 **Jose Eduardo Barcelon**  
Universita di Parma, Italy  
*Surface assisted synthesis, characterization and electronic properties of pristine and oxygen-exposed graphene nanoribbons on Ag(110)*
- Po05 **Sebastian Cisneros**  
Leibniz Institute for Catalysis, Germany  
*Modulating the chemical state of Ru supported on TiO<sub>2</sub> to control CO<sub>2</sub> hydrogenation selectivity*
- Po07 **Xingchao Dai**  
Leibniz Institute for Catalysis, Germany  
*Extending the potential of CuO<sub>x</sub> catalysts for valorization of biomass-based platform molecules by downsizing clusters to active single sites*
- Po09 **Veronique Dupuis**  
Institut Lumière Matière, France  
*Nanomagnets elaborated by Mass-Selected Low Energy Cluster Beam Deposition*
- Po11 **Katharina Engster**  
Institute of Physics, University of Rostock, Germany  
*Clusters as nanoscale light sources: electron excitations on silicon and tetracene crystallites*
- Po13 **Max Flach**  
Helmholtz Zentrum Berlin, Germany  
*Charge transfer in L-edge x-ray absorption spectra of diatomic gas-phase iron halide cations: beyond the oxidation state*
- Po15 **Lena Haager**  
TU Wien, Austria  
*Comparison of single Rh adatoms on  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>(1102) and TiO<sub>2</sub>(110) stabilized by adsorbed water*
- Po17 **Guillermo Herrera - to be presented by Veronique Dupuis**  
Institut Lumière Matière, France  
*Size and surface/interface effects on the magnetic behavior of B<sub>2</sub>- like supported FeRh nanoclusters*
- Po19 **Zdeněk Jakub**  
Central European Institute of Technology (CEITEC), Czech Republic  
*Adsorbate-induced structural evolution changes the mechanism of CO oxidation on a Rh/Fe<sub>3</sub>O<sub>4</sub>(001) model catalyst*
- Po21 **Kevin Anthony Kaw**  
Quantum Solid-State Physics, KU Leuven, Belgium  
*The wavelength-dependent non-linear absorption and refraction of Au<sub>25</sub> and Au<sub>38</sub> monolayer-protected clusters*
- Po23 **Monika Klusáčková**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Photoelectrochemical activity and selectivity of SrTiO<sub>3</sub> nanocubes*
- Po25 **Jaroslav Kočíšek**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Electron Attachment to Fe(CO)<sub>5</sub> Aggregates on Ar Clusters*

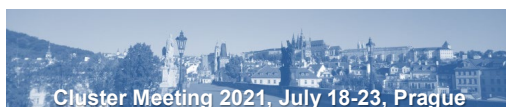


- Po27 **Anastasia Kurbanova**  
Charles University, Czech Republic  
*Preparation of Fe@zeolite composite hydrogenation catalysts with metallic nanoparticles by reductive demetallation of Fe-zeolites*
- Po29 **Ang Li**  
Charles University, Czech Republic  
*Tracing the stability of subnanometric metal clusters on layered zeolite by in- situ TEM investigation*
- Po31 **Peter Matvija**  
Charles University, Czech Republic  
*Ceria-supported metal clusters studied by STM and NAP-XPS*
- Po33 **Shashikant Kadam**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Design and application of capillary-based reactor for microactivity reference catalytic testing*
- Po35 **Vladimíra Petráková**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Modified absorption of dye molecules is related to specifically treated silver nanoparticles and is not a general phenomenon in metallic nanoparticles*
- Po37 **Pavel Pleskunov**  
Charles University, Czech Republic  
*Reactive magnetron sputtering and gas condensation of tantalum oxynitride nanoparticles with architecture and band gap controlled by design*
- Po39 **Ali Rafsanjani-Abbasi**  
Technische Universität Wien / Vienna University of Technology, Austria  
*Thermal stability and CO-induced mobility of single Pt adatoms supported on the  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>(11 $\bar{0}$ 2) surface*
- Po41 **Leo Sala**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Stability of gold nanoparticle-DNA origami conjugates under gamma irradiation*
- Po43 **Barbora Sedmidubská**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Low-energy electron attachment to L- Valine.(H<sub>2</sub>O)<sub>n</sub> clusters*
- Po45 **Panukorn Sombut**  
Institute of Applied Physics, TU Wien, Austria  
*Polarons in single atom catalysts: case study of Me<sub>1</sub>=[Au<sub>1</sub>, Pt<sub>1</sub>, Rh<sub>1</sub>] on TiO<sub>2</sub>(110)*
- Po47 **Marija Stojkowska**  
University of Genova, Italy  
*Monitoring oxidation and reduction of iron oxide islands on Pt(111)*
- Po49 **Mykhailo Vaidulych**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Cluster deposition instrument: from a single atom to nanoscale clusters*
- Po51 **Arik Beck - to be presented by Marc Willinger**  
ETH Zürich, Switzerland  
*Following the structure of copper-zinc-alumina across the pressure gap in carbon dioxide hydrogenation*
- Po53 **Dianwei Hou**  
Charles University, Czech Republic  
*Theoretical insights into zeolite encapsulated subnanometer platinum*



## POSTERS – THURSDAY

- Po02 **Öyküm Naz Avcı**  
CNR-ICCOM, Italy  
*Oxygen evolution reaction (OER) mechanism and activity on spinel oxide-type catalysts*
- Po04 **Lucinda Blanco Redondo**  
Charles University, Czech Republic  
*Ir-decorated Pt nanoparticles as bifunctional catalyst for unitized regenerative proton exchange membrane fuel cells*
- Po06 **Mayara da Silva Santos**  
Helmholtz-Zentrum Berlin für Material und Energie GmbH, Germany  
*High-resolution X-ray absorption spectroscopy in a cryogenic ion trap as a tool to investigate 3d metal–oxygen bonds*
- Po08 **Alina M. Darabut**  
Charles University, Czech Republic  
*Preparation and characterization of thermally expanded graphite. Applications for PEM FCs technology*
- Po10 **Andreas Erlebach**  
Charles University Prague, Czech Republic  
*Cluster confinement in zeolites: insights from accurate neural network potentials*
- Po12 **Michal Fárník**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Pickup and reactions of molecules on carbonaceous clusters from the perspective of atmospheric and interstellar processes*
- Po14 **Estefania German**  
Universidad de Valladolid, Spain  
*DFT study of TM<sub>6</sub> (TM: V, Co, Pd) adsorption on Boron-graphdiyne layer*
- Po16 **Andreas Hauser**  
Graz University of Technology, Austria  
*Mixed-method and artificial intelligence-enhanced strategies toward the modelling of metallic nanostructures*
- Po18 **Vana Chinnappa Chinnabathini**  
KU Leuven, Belgium  
*Composition-tuned AuAg bimetallic clusters-modified TiO<sub>2</sub> films as efficient self-cleaning surfaces under visible light*
- Po20 **Ewald Janssens**  
KU Leuven, Belgium  
*Methanol dehydrogenation by cationic vanadium clusters*
- Po22 **Elisa Jimenez-Izal**  
University of the Basque Country (EHU/UPV) /Donostia International Physics Center (DIPC), Spain  
*Doping Pt with Ge to reduce the deactivation of the catalyst*
- Po24 **Jaroslav Kočíšek**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Butadiene clusters as a model for nanoelectrets*
- Po26 **David Kubička**  
University of Chemistry and Technology Prague, Czech Republic  
*Copper clusters for environmentally friendly hydrogenolysis of esters to alcohols – effects of support properties and copper introduction method*
- Po28 **Florian Lackner**  
Graz University of Technology, Austria  
*Rhodamine B covered Au nanoparticles separated by an intermediate spacing layer in helium nanodroplets*



- Po30 **Aleš Marek**  
HVM PLASMA, spol. s r.o., Czech republic  
*Long-term stability of nanoparticle source operation for semi- industrial application and role of reactive admixtures*
- Po32 **Kinga Mlekodaj**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Splitting of O<sub>2</sub> at room temperature over distant binuclear transition metal centers in zeolites for direct oxidation of methane to methanol*
- Po34 **Daniil Nikitin**  
Charles University, Faculty of Mathematics and Physics, Czech Republic  
*Silver nanofluids prepared by direct transfer of magnetron-sputtered nanoparticles to liquid polymer*
- Po36 **Vladimíra Petráková**  
Heyrovsky Institute of Physical Chemistry, Czech Republic  
*Controlled assembly of plasmonic nanoparticles and fluorophores for sub-diffraction manipulation of light*
- Po38 **Muhammad Irfan Qadir**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Selective CO<sub>2</sub> hydrogenation to olefin-rich hydrocarbons driven by FeO<sub>x</sub> nanorods decorated with Cu nanoparticles*
- Po40 **Thantip Roongcharoen**  
Institute for the Chemistry of OrganoMetallic Compounds, Italy  
*Catalysts design by predictive modelling of aqueous phase reforming of liquid renewable feedstocks*
- Po42 **Gustavo Santiso-Quinones**  
Eldico Scientific AG, Switzerland  
*3D-ED continuous rotation method in nanocrystallography: a dedicated device for structural elucidation of nanocrystalline particles*
- Po44 **Karolína Simkovičová**  
J. Heyrovský Institute of Physical chemistry, Czech Republic  
*CO<sub>2</sub> conversion on Cu/Fe nanostructured catalysts*
- Po46 **Liana Socaciu-Siebert**  
SPECS Surface Nano Analysis GmbH, Germany  
*Routine operando studies with Near Ambient Pressure - XPS*
- Po48 **Rika Tandiana**  
Université Paris Saclay, France  
*Investigation on the adsorption geometry of substituted aromatic compounds on the surface of gold nanoparticles: quantum chemical topology and vibrational study*
- Po50 **Stanislav Valtera**  
J. Heyrovský Institute of Physical Chemistry, Czech Republic  
*Subnanometer cluster-based catalysts for highly selective oxidative dehydrogenation of cyclohexene*
- Po52 **Kevin Rossi**  
Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland  
*A Next-Gen site-counting method to link size, shape, and activity of metallic nanocatalysts for the electrochemical reduction of small molecules*