https://cost-cosy.eu/

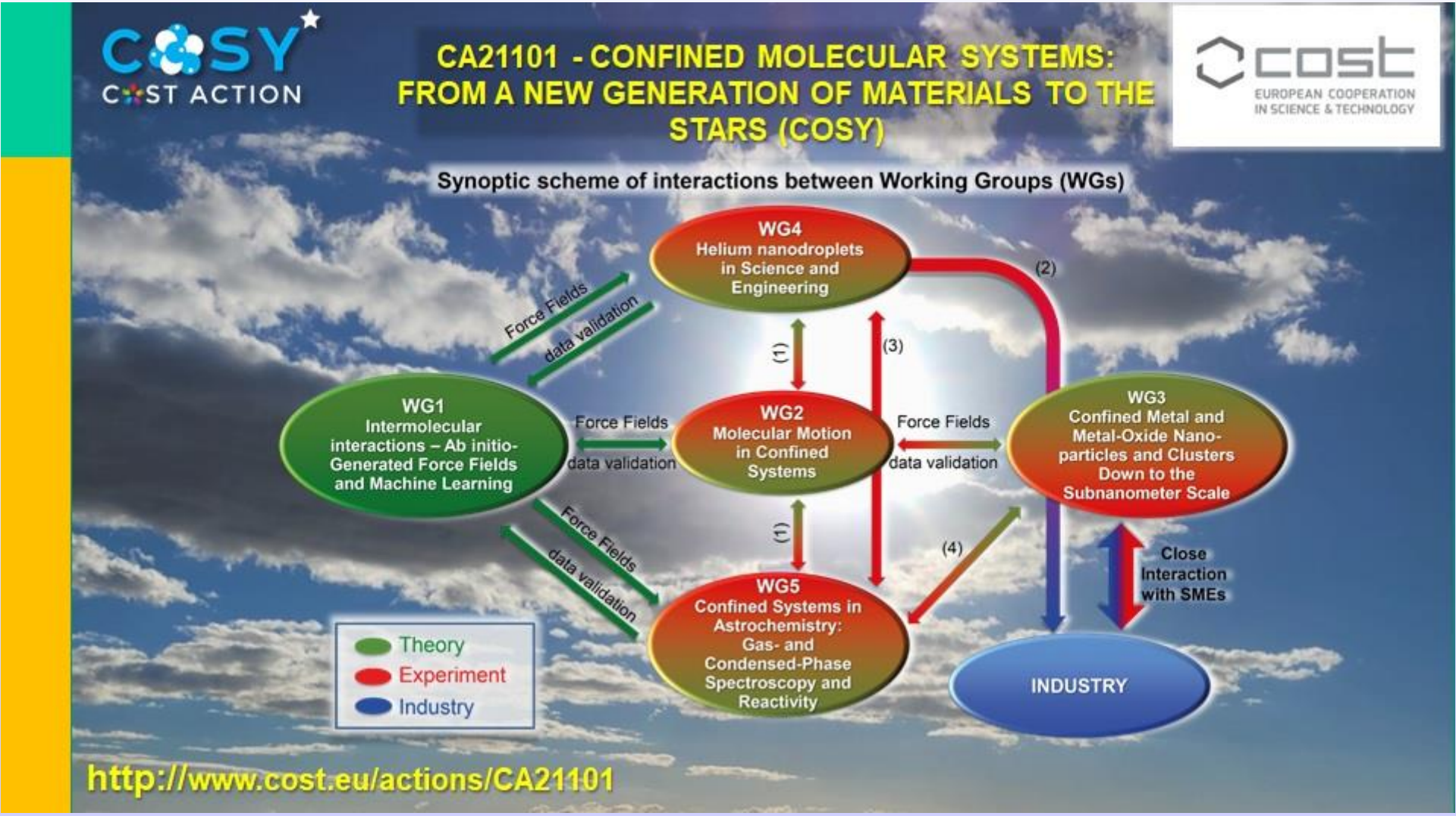
WG3-COSY satellite of the Cluster-Surface Interactions 2024

https://www.e-conversion.de/csi-2024/

Bernried, Germany, April 10th 2024

https://cost-cosy.eu/activity/cosy-satellite-of-the-clustersurface-interaction-meeting/

Organizer: Alessandro Fortunelli



"COSY" COST Action http:cost.eu/actions/CA21101/
European Cooperation in Science and Technology
Marìa Pilar de Lara Castells (CSIC) Chair

Various aspects of surface-deposited clusters are considered in CSI, with a focus on growth, dynamics, electronic structure, and applications, addressing both experiment and theoretical modelling. Cluster deposition on supports represents an important form of confinement, with implications in heterogeneous catalysis, sensing, etc. Indeed, the COSY Action and its WG3 have many members working in closely related fields. As a scientific community that shares common interests and perspectives, it seemed thus natural to network and join forces with CSI by organizing a satellite meeting of the CSI2024 conference (thanks Barbara Lechner for coordination with CSI, Richard Palmer for suggesting, and the AC Marìa Pilar de Lara Castells for support).

Our goals in this satellite are:

(i) to spread knowledge about the research conducted by the scientifically related COSY and CSI communities,

(ii) to trigger collaborations between CSI and COSY researchers.

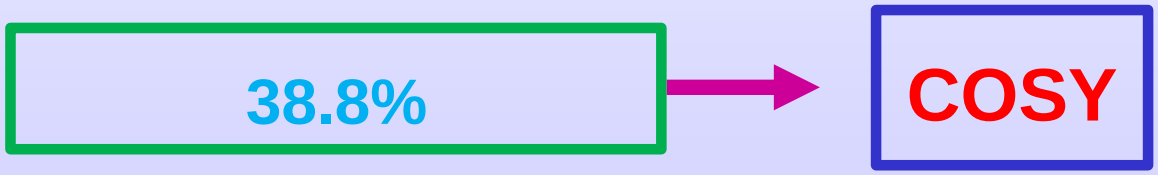
This will translate into tangible outcomes:

(i) selected slides of the meeting shared via the COSY Action Web site including from the Round Table between COSY and CSI members held at the symposium

(ii) common publications and presentation at conference to be promoted by this meeting involving COSY and CSI members.

… Indeed, the COSY Action and its WG3 have many members working in closely related fields. …

CSI2024 meeting: statistics of talks by COSY members



Wednesday April 10th – PROGRAM AT A GLANCE

CSI2024/WG3-COSY-COST action satellite meeting

09:00-10:30 – Session 1 – chair: Alessandro Fortunelli, talks: M. Arturo López-Quintela & Maciej Rogala

10:30-11:00 *coffee*

11:00-12:30 – Session 2 – chairs: Joanna Olszowka & Giacomo Melani, talks: Sandra Gómez & Junjie Shi & Lenard Carrol (zoom)

12:30-14:00 *lunch*

14:00-16:00 – Session 3 – chairs: Sandra Gómez & Junjie Shi, talks: hot topics: Giacomo Melani, Round Table (Francesca Baletto, Joanna Olszowka, Richard Palmer, Alessandro Fortunelli)

Wednesday April 10th

CSI2024/WG3-COSY-COST action satellite meeting

Session 1 – chair: Alessandro Fortunelli

09:00-09:45 M. Arturo López-Quintela, University of Santiago de Compostela (Spain), malopez.quintela@usc.es, "Metal clusters of small atomicity as a versatile tool in catalysis"

09:45-10:30 Maciej Rogala, University of Lodz (Poland), maciej.rogala@uni.lodz.pl, "Defect Migration Behind Resistive Switching at Metal Oxides Surfaces"

10:30-11:00 *coffee*

Wednesday April 10th

CSI2024/WG3-COSY-COST action satellite meeting

Session 2 – chairs: Joanna Olszowka & Giacomo Melani

11:00-11:30 Sandra Gómez, University of Salamanca (Spain), sandra.gomez@usal.es, "Time evolution of PAHs and molecular crystals upon light irradiation"

11:30-12:00 Junjie Shi, TU-Wien (Austria), "Design and synthesis robust catalysts: A study trip from nanoparticulate catalyst to single atom alloy", junjieshiding@gmail.com

12:00-12:30 Lenard Carrol (zoom), University of Free State (S.Africa)/IFF-CSIC (Spain), "Confinement and Dimerization of Cu5 on Graphene", lenardcarroll27@gmail.com

Wednesday April 10th

CSI2024/WG3-COSY-COST action satellite meeting

Session 3 – chairs: Sandra Gómez & Junjie Shi

14:00-14:15 hot topic talk: Giacomo Melani, CNR-ICCOM (Italy), giacomo.melani@cnr.it, "The effect of solvation on the properties of pristine and defective oxide interfaces for solar water splitting"

14:15-16:00 CSI/COSY Round Table:

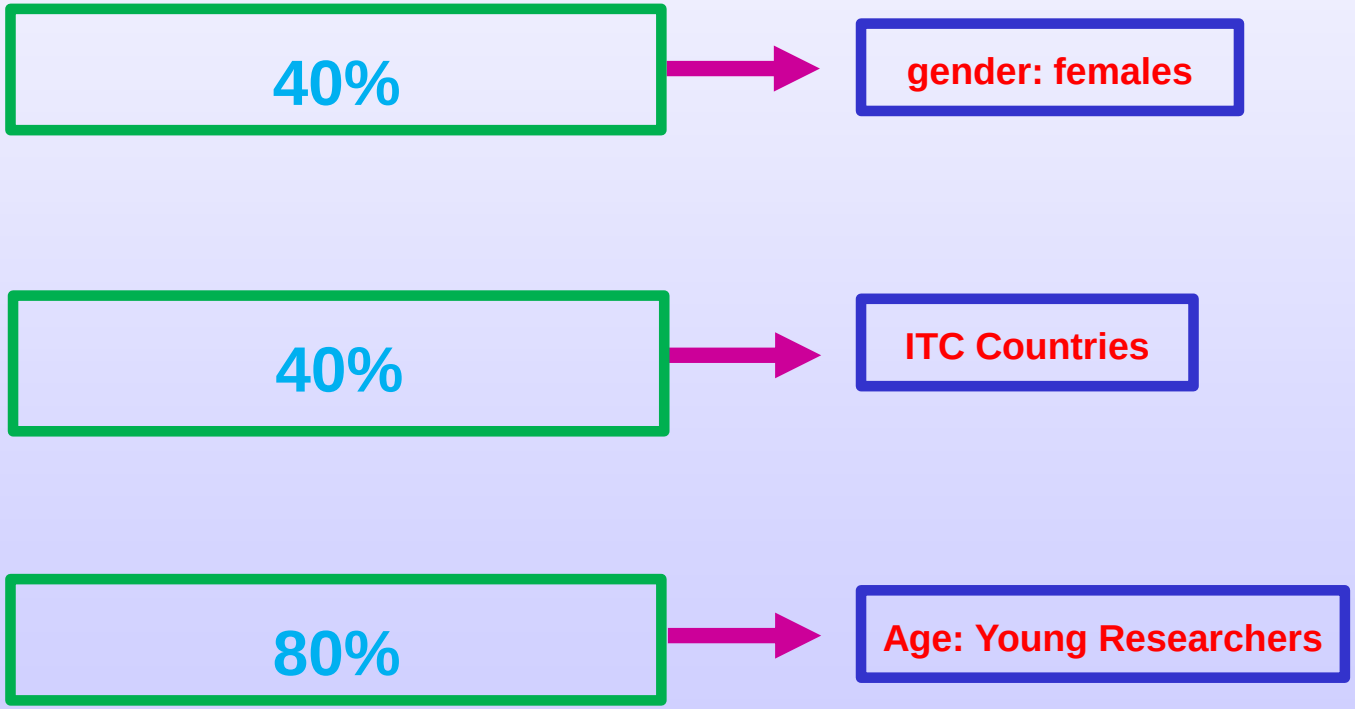
Joanna Olszowka, Czech Academy of Sciences (Prague, Czech Republic), joanna.olszowka@jh-inst.cas.cz, "In search of the true support role – dynamics of ZrO2 defects in dry methane reforming"

Francesca Baletto, University of Milano (Italy), francesca.baletto@unimi.it, "Design of Au-Based Nanoalloys as Plasmocatalysts"

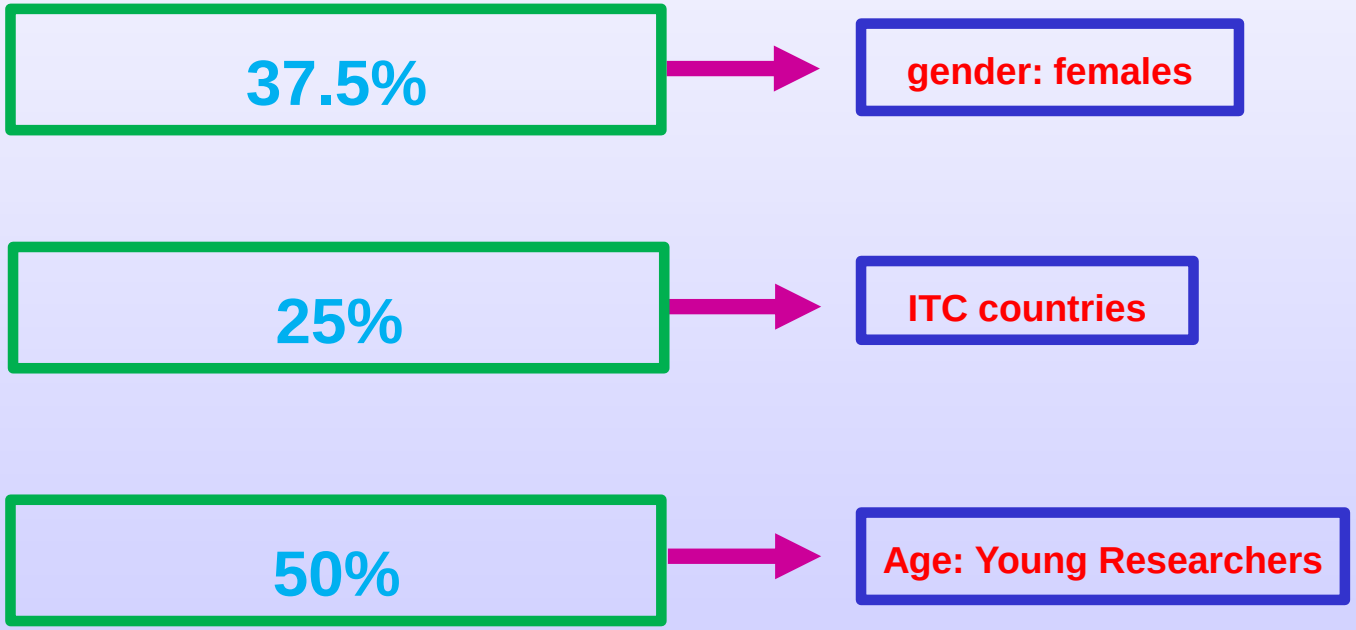
Richard Palmer, University of Swansea (Wales), r.e.palmer@swansea.ac.uk, "Challenges for cluster science: Cluster environments eg cluster-cluster and cluster-gas interactions"

Alessandro Fortunelli, CNR-ICCOM, Pisa (Italy), alessandro.fortunelli@cnr.it, "Carbonaceous Supports for Electrocatalysts: ORR (Pt) and OER (Co) systems"

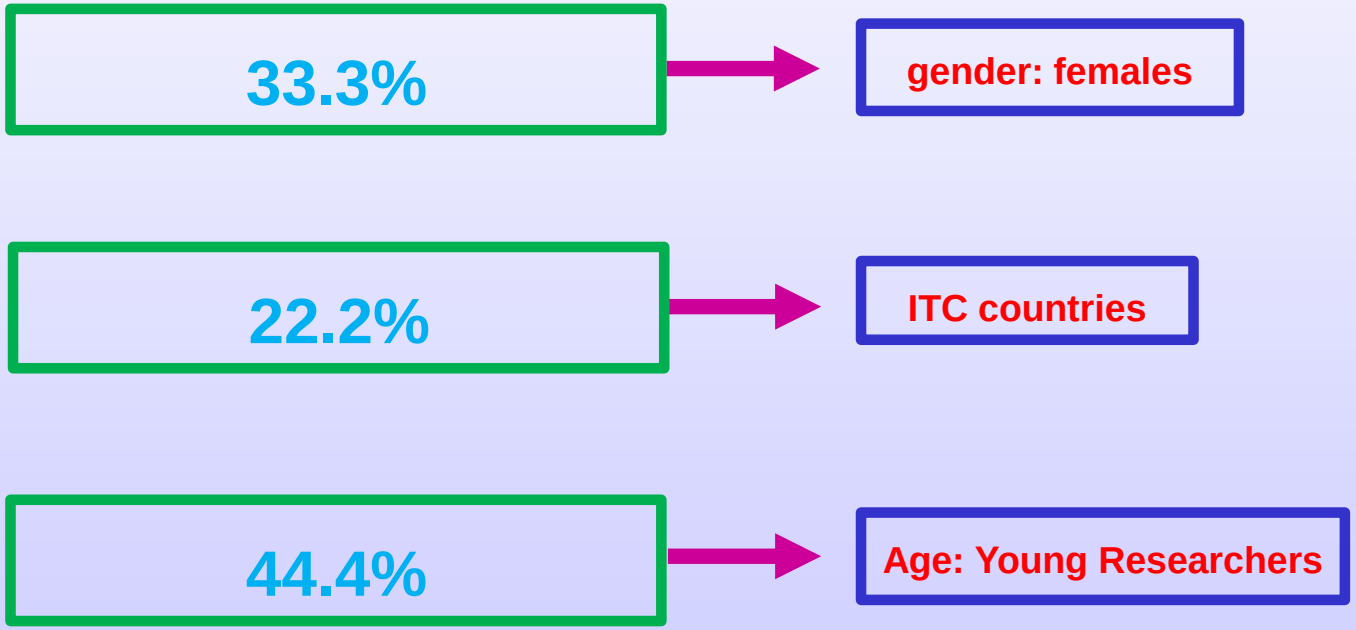
COSY satellite: chairpersons' statistics



COSY satellite: reimbursement statistics



COSY satellite: talks' statistics



Wednesday April 10th

CSI2024/WG3-COSY-COST action satellite meeting

Session 3 – CSI/COSY Round Table – chairs: Sandra Gómez & Junjie Shi

14:15-16:00 CSI/COSY Round Table:

Francesca Baletto (FB), University of Milano (Italy)
Joanna Olszowka (JO), Czech Academy of Sciences (Czech R)
Richard Palmer (RP), University of Swansea (Wales)
Alessandro Fortunelli (AF), CNR-ICCOM (Italy)

… and general discussion

whence the **outcome** in the next slide:

Session 3 – CSI/COSY Round Table (RT) – chairs: Sandra Gómez & Junjie Shi

outcome from RT presentations and discussions:

- **very positive experience overall**: good interactions between CSI/COSY members: prospective collaborations involving e.g. CSI experimentalists & COSY theoreticians, COSY experimentalists & CSI theoreticians, and other combinations
- critical **confinement phenomena** of: *carbonaceous(AF)* or *oxide(JO)* **support** effects on cluster catalysts + *support(RP)*- or *mass-transport(FB)*-mediated cluster/cluster **cooperation**
- broadening the CSI scope to – say ☺ – **Cluster/Environment Interaction (CEI)**
- encouragement to organize a **two-day COSY/CEI meeting** in about a year time (2025)