

**Poster List** (FINAL numbers – September 22<sup>nd</sup>, 2026)

1. **Effect of hydrogen on the mechanical properties of iron-chromium alloy: an in situ experimental approach** — Szilvia Kalacska (CNRS Laboratoire Georges Friedel, MINES Saint-Etienne, France)
2. **Spherical time-dependent plasticity studies of advanced fusion steels** — James Gibson (UK Atomic Energy Authority, UK)
3. **PROBING VISCOELASTICITY UP TO 1 kHz USING HIGH-DYNAMIC NANOINDENTATION** — Christian Minnert (Empa, Switzerland)
4. **Contact Renewal Accelerates Atom-by-Atom Wear of Microcrystalline Diamond** — Ozan Sahin (Advanced Research Center for Nanolithography, Netherlands)
5. **Assessment of High Strain Rate Nanoindentation Analysis Methods** — Kevin Schmalbach (Bruker, USA)
6. **Scratch testing at elevated temperatures on glasses – A comparison between nanoindentation and scratch testing** — Dennis Bedorf (SURFACE, Germany)
7. **Microstructural heterogeneity and phase interactions in ferritoperlitic steel: a nanoindentation and hardness mapping approach** — Etienne Andre (Centrale Lyon, France)
8. **Multi-Scale Micromechanical Testing For A New Polymer Core Solder Ball Interconnections Reliability In Operating Conditions** — Yvan MARTHOURET (Ecole Nationale Supérieure Des Mines De Saint-Etienne, France)
9. **Micromechanical characterization of materials for Solid Oxide Cells under relevant conditions** — Sandra García González (Ciefma, UPC, Spain)
10. **A dynamic nanoindentation method for determining the brittle-to-ductile transition temperature** — Stefan Zeiler (Montanuniversität, Austria)
11. **Annealing-induced grain boundary relaxation in nanocrystalline Ti-Nb alloys - insights from mechanical spectroscopy and correlative characterisation** — Lukas Lang (Montanuniversität, Austria)
12. **Strain-Rate-Dependent Microscale Deformation of an Intermetallic–Mg Interface under Shear Loading** — Leiming Du (Max Planck Institute for Sustainable Materials, Germany)
13. **The role of grain boundaries in hydrogen microstructure interactions** — Clara Reinhart (Max Planck Institute for Sustainable Materials, Germany)
14. **Nanoindentation of bone in dry and wet conditions: Effect of strain rate, indent spacing, degradation and local mineralization** — Dennis Drosel (FAU Erlangen-Nürnberg, Germany)

15. **Prediction of compressive flow curves from Nanoindentation and Pile-Up data utilizing Machine Learning** — Matthias Glosemeyer (FAU Erlangen-Nürnberg, Germany)
16. **DFXM characterisation of dislocation avalanches with concurrent acoustic emission measurements** — Peter Ispanovity (ELTE Eötvös Loránd University, Hungary)
17. **A new method to determine surface mechanical properties as a function of indentation depth: application to High Temperature Scanning Indentation technique** — Fatima-Zahra MOUL-EL-KSOUR (Ecole Centrale de Lyon / LTDS, France)
18. **Determination of surface mechanical properties by microshear: application at very high strain rates** — Fatima-Zahra MOUL-EL-KSOUR (LTDS, ECL, CNRS, France)
19. **Nanohardness and microcantilever strength of compositionally complex ultra-high temperature boride/carbide ceramics** - Jan Dusza (SASKE, Slovakia)
20. **Micromechanical testing of a machining-induced white layer on a 15-5PH stainless steel** — Guillaume Kermouche (EMSE, France)
21. **Multimaterial 3d printing: solving the challenge of brittle interfaces by geometry** — Nerea Abando (ETH Zurich, Switzerland)
22. **In situ TEM crack propagation in nanocrystalline Cu-W-Re down to the atomic scale** — Jianxiao Cui (IMD-1, FZ Jülich, Germany)
23. **High-temperature wear in furnace component for hot stamping: from industrial analysis to lab testing design** — Giselle Ramirez Sandoval (UPC, Spain)
24. **Orientation-dependent deformation mechanisms in niobium alloy c103** — Aurelia Moriyama-Gurish (Yale University, USA)
25. **Evaluating the mechanical properties of intermetallic phases in multicomponent zinc alloys via EBSD and micro-scale testing** – Wiktor Bednarczyk (AGH University of Krakow, Poland)
26. **Resolving the influence of vacancies and chemical composition on plasticity in B2 FeAl alloys via micropillar compression on diffusion couples** — Jung Soo Lee (Max Planck Institute for Sustainable Materials, Germany)
27. **Screening room-temperature plasticity of perovskite oxides via solid solution and scale-bridging indentation tests** — Alexander Frisch (KIT, Germany)
28. **Impact of rotational tribological testing on microstructural evolution** — Antje Dollmann (KIT, Germany)

29. **Unlocking Structure-Property Relationships in Sodium-based Electrolytes by Cryo-EBSD** — Nicolò Maria Della Ventura (Max Planck for Sustainable Materials, Germany)
30. **Interfacial hydrogen mediates microscratch-induced deformation in pearlite** — Kaili Feng (Max Planck for Sustainable Materials, Germany)
31. **NANOINDENTATION BASED ASSESSMENT OF MECHANICAL BEHAVIOR OF  $\gamma'$ -LEAN NI-BASED SUPERALLOY – HAYNES 282** — Anjali Gawande (IISc, India)
32. **Deformation-induced structural transformations in freestanding pre-notched CoCrFeNi thin films** — Abira Rashid (IIT Gandhinagar, India)
33. **3D Printed Metal MEMS Devices: Fabrication, Optimization, and Characterization** — Nhat Hoang Van (Max Planck for Sustainable Materials, Germany)
34. **Hydrogen–dislocation interaction in bcc FeCr alloys by in situ micropillar compression** — Jazmin Duarte (Max Planck for Sustainable Materials, Germany)
35. **Effect of Grain Boundary Doping on Thermomechanical Behavior of Cu Thin Films** — Piyush Jagtap (IIT Roorkee, India)
36. **Ab initio simulations of small nanoparticles' mechanical properties: strength and plasticity mechanisms** — Sandrine Brochard (Institut Pprime, France)
37. **Hydrogen Effects on Plasticity in BCC Materials: A Tritium-Based Micromechanical Study** — Maral Sarebanzadeh (KIT, Germany)
38. **Probing the HEDE Mechanism in Hydrogen Embrittlement via Tritium-based In-situ Microcantilever Fracture** — Johannes Reibenspies (KIT, Germany)
39. **Advanced characterization protocols for advanced heterogeneous materials based on high-speed nanoindentation mapping** — Giulia Gigante (Roma Tre University, Italy)
40. **EXPERIMENTAL AND COMPUTATIONAL ANALYSIS OF THE ULTRA-HIGH MECHANICAL DAMPING IN NANOPILLAR ARRAYS OF Cu–Al–Ni SHAPE MEMORY ALLOYS** — Ander Abadin (University of the Basque Country, Spain)
41. **New insights on the initial plasticity in metallic glasses via nanoindentation** — Valeria Lemkova (Saarland University, Germany)
42. **Polishing-induced residual stresses at the sub-microscale in commercially pure titanium** — Kento Takahashi (KU Leuven, Belgium)
43. **Multi-scale characterization using nanoindentation maps of tooth enamel across species** — Wout Van Wesemael (KU Leuven, Belgium)

44. **Investigation of Electron Beam Effect on Dislocation-mediated Plastic Deformation of ZnO Single Crystals under In-situ Micropillar Compression** — Ryosuke Kinoshita (University of Osaka, Japan)
45. **Fracture toughness of V alloyed TiN coatings using micro pillar splitting** — Urmila Regar (Linköping University., Sweden)
46. **A back-side electrochemical hydrogen charging platform for in situ SEM and nano-/micromechanical testing** — Amir Hamzehei (Max Planck Institute for Sustainable Materials, Germany)
47. **Isolating athermal hydrogen-metal interactions via cryogenic nanoindentation** — Amir Hamzehei (Max Planck Institute for Sustainable Materials, Germany)
48. **Liquid-Encapsulated Copper Microspheres: Impact of Global and Local Stress State on Fracture Behavior** — Jeongin Paeng (Max Planck Institute for Sustainable Materials, Germany)
49. **Advanced Computer Vision Techniques for Deformation Analysis of in situ Micromechanical Tests** — Julius Keckes (Montanuniversität, Austria)
50. **Intrinsic Mechanical Properties of Thin Films via In-Situ SEM Micro-Tensile Testing** — Thomas Astecker (TU Wien, Austria)
51. **Mechanically Driven Li Dendrite Penetration in Garnet Solid Electrolyte** — Yuwei Zhang (Max Planck Institute for Sustainable Materials, Germany)
52. **Isolating shear-coupled grain boundary migration via double-notched pure shear pillars in Cu  $\Sigma$ 5 bicrystals** — Daeho Kim (Max Planck Institute for Sustainable Materials, Germany)
53. **Instrumented indentation testing on engineering materials: effect of temperature** — Hannah Zhang (National Physical Laboratory, UK)
54. **Nanoindentation fatigue as a tool for investigating mechanical grain growth kinetics in nanocrystalline metals** — Florentin Gaub (Saarland University, Germany)
55. **Correlative nanoindentation and microscratching for particle-matrix interface characterization** — Nora Kleser (Saarland University, Germany)
56. **Slip and deformation in high entropy carbides: A micromechanics based study** — Gaurav Mohanty (Tampere University, Finland)
57. **From Electrodeposition to Deformation: Microstructure and Strain Rate Effects of 3D Printed Copper Micro-Tensile Samples** — Alvaro Diego Bedoya Zapata (Max Planck Institute for Sustainable Materials, Germany)
58. **Experimental considerations for correlating indentation hardness with tensile yield stress for thermoplastic polymers** — Jacob Hempel (Texas A&M, USA)

59. **Damage evolution in die-cast Al-Mg-Si alloys: Resolving the role of elongated intermetallic compounds by in-situ SEM-DIC** — Felix Schulze (TU Darmstadt, Germany)
60. **Microstructure and mechanical properties of tungsten fabricated by electron beam powder bed fusion** — Lei Zhu (U Catalonia, Spain)
61. **Micromechanical characterization of cemented carbides with alternative binders under elevated temperatures and varying strain rates** — Francesc Barberà Flichí (UPC, Spain)
62. **Hydrogen effects on the micromechanical behaviour of palladium: Microstructure–property correlations** — Syed Abdur Rahman (University of Oxford, UK)
63. **Atomistic simulation of the compression of Si/SiO<sub>2</sub> core-shell nanoparticles : Impact of oxide thickness and morphology on mechanical response** — Jules Romuald Mvondo Edou/ Sandrine Brochard (University of Poitiers, France)
64. **Correlative microstructural and micromechanical characterization of a ductile disordered phase in a high-aluminum refractory alloy** — Jin Wang/ Ruth Schwaiger (Forschungszentrum Juelich, Germany)