

Poster Presentations

1. **MecaNano – European network for mechanics of matter at the nano-scale**
Benoit Merle, University of Kassel, Germany
2. **The effect of size, crystal orientation and temperature on the deformation of cast microwires**
Luciano Borasi, EPFL, Switzerland
3. **Temperature-dependance evaluation on deformation processes in the Alloy 718 using high-resolution digital image correlation**
Damien Texier, Institut Clément Ader - UMR CNRS 5312, France
4. **Strategies in reinforcements of electrospun fibers and membranes**
Urszula Stachewicz, AGH University of Science and Technology, Poland
5. **The calibration of nanoindenters revisited**
Thomas Chudoba, ASMEC GmbH, Germany
6. **Experimental and numerical investigations of nanoindentation properties at the sub-grain level in Ni-based and Ti-based polycrystalline alloys**
Damien Texier, Institut Clément Ader - UMR CNRS 5312, France
7. **Correlation between mechanical properties and microstructure on different ground cemented carbides grades under service-like working conditions**
Joan Josep Roa Rovira, STEROS GPA Innovative, Spain
8. **Indentation unloading phase transformations in silicon: A new perspective**
Gerald Josef Kamillo Schaffar, Montanuniversität Leoben, Austria
9. **Fast fabrication of micropillar arrays using a combination of laser and FIB for micromechanical compression tests**
Fang Zhou, ZEISS Research Microscopy Solutions, Carl Zeiss Microscopy GmbH, Germany
10. **Nanoindentation material testing using SMART and SMART CUBES**
Dennis Bedorf, SURFACE, Germany
11. **Nanomechanical testing of novel conducting 2D composite materials produced by additive manufacturing**
Aaron D. Sinnott, Trinity College Dublin, Ireland
12. **A micropillar compression investigation into the plastic flow properties of additively manufactured alloys**
Shi-Hao Li, Nanyang Technological University, Singapore
13. **Hydrogen induced hardening effect and the diffusion behavior in bcc Fe-Cr alloys by in situ nanoindentation**
Jing Rao, Max-Planck-Institut für Eisenforschung GmbH, Germany
14. **Temporal sequence of deformation twinning under tribological load**
Antje Dollmann, KIT, Germany

15. **On the effects of microstructural orientation on fracture toughness in (V,Al)-nitride and -oxynitride thin films**
Markus Reiner Schoof, RWTH Aachen University, Germany
16. **Nano-stamping of material surface during nano-indentation by the indenter: A fingerprint for contact area precise measurement**
Vincent Keryvin, University of South-Brittany, France
17. **Thermal activation of plasticity in BCC materials investigated by cryo-micropillar compression**
Carl F. Kusche, RWTH Aachen University, Germany
18. **Exploring accurate structure, composition and mechanical properties of η carbides in high tungsten iron-based alloy: High-throughput mapping and DFT calculations**
Yujie Meng, KLA, USA
19. **Deformation behavior and plasticity in FCC-BCC high entropy alloy nanolaminate structures**
Amit Sharma, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland
20. **Continuous measurement of strain rate sensitivity – A novel nanoindentation method**
Hendrik Holz, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
21. **Micropillar compression of anisotropic Al₂O₃-based eutectic composite**
Yuta Aoki, The University of Tokyo, Japan
22. **Dislocation and grain boundary interaction in oxides: Slip transmission or cracking?**
Kuan Ding, TU Darmstadt, Germany
23. **Pillar compression study of binderless tungsten carbide consolidated by flash sintering and spark plasma sintering**
Isacco Mazo, University of Trento, Italy
24. **Nano mechanical and microstructural investigation of damage mechanisms in copper wire bonds**
Liz Karanja, Centre d'Élaboration de Matériaux et d'Études Structurales, France
25. **Synthesis and characterization of metal-ceramic metamaterials at the microscale**
Johann Jakob Schwiedrzik, Empa Swiss Federal Laboratories for Materials Science and Technology, Switzerland
26. **About the measurement of restoration kinetics in metals using the HTSI method**
Gabrielle Tiphene, Ecole Centrale de Lyon, France
27. **Effect of hydrogen on the nanomechanical behavior of dual-phase nanocrystalline high-entropy alloy**
Zhe Gao, Hanyang University, South Korea
28. **Nanoparticle stabilized thin film metallic glasses**
Emese Huszar, Empa, Switzerland
29. **Shear-coupling migration of grain boundaries in UFG Al**
Marc Legros, CEMES-CNRS, France

30. **Effects of radiation damage on the critical resolved shear stresses in zirconium alloys for nuclear applications**
James Gibson, University of Oxford, United Kingdom
31. **Intrinsic room temperature ductilisation of lean rare-earth free ternary Mg alloys**
Wassilios Johannes Delis, RWTH Aachen University, Germany
32. **Using small-scale mechanics to probe the origins of segregation-induced strengthening**
Mohammed Kamran Bhat, Max-Planck-Institut für Eisenforschung GmbH, Germany
33. **Investigation of carbon fibres mechanical behaviour at micro/nano scales**
Vincent Keryvin, University of South-Brittanny, France
34. **Mechanical properties and fracture behavior of TiB₂+z thin films**
Anna Hirle, CDL-SEC at TU Wien, Austria
35. **Comparison of mechanical properties of titanium processed by ECAP: Macro vs. micro**
Jan Maňák, Institute of Physics of the Czech Academy of Sciences, Czech Republic
36. **High strain rates micromechanical behavior of materials: A coupled experimental and numerical approach**
Benedicte Adogou, Ecole des mines de Saint-Etienne, LGF UMR 5307 CNRS, France
37. **Localization of plastic strain in alloy 718 using digital image correlation**
Malo Jullien, Institut Clément Ader - UMR CNRS 5312, CEMES-CNRS, France
38. **Mechanical properties and deformation mechanisms of manganese sulphide inclusions**
Maximilian A. Wollenweber, RWTH Aachen University, Germany
39. **Mechanical behaviors of agglomerated ceramic powders for cold spraying applications**
Sergio Sao Joao, Mines Saint-Etienne, LGF UMR5307 CNRS, France
40. **Development of a custom high strain rate nanoindenter for small scale mechanical characterization over a wide range of strain rates**
Stefan Zeiler, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
41. **Investigating adhesion of polyimide in semiconductor devices with cross-sectional nanoindentation**
Moritz Hartleb, KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, Austria
42. **Local mechanical response in the vicinity of single grain boundary in YSZ measured by nanoindentation**
Ryo Nakamura, The University of Tokyo, Japan
43. **Investigating deformation mechanisms in thin films through design and synthesis of model nanolaminate film systems**
Laszlo Pethö, Empa, Switzerland
44. **Three-dimensional characterization of damage in dual phase steels with deep learning**
Setareh Medghalchi, RWTH Aachen University, Germany

45. **Slip and deformation behavior in intermetallic Cobalt-Samarium phases**
Tobias Stollenwerk, RWTH Aachen University, Germany
46. **Nanoindentation induced reversible plasticity detected by acoustic emission**
Jaroslav Cech, Czech Technical University in Prague, Czech Republic
47. **The effect of thiourea concentration in electrolytic solution on the indentation hardness and mechanical properties of electrodeposited copper samples**
Anuradha Herath, Coventry University, United Kingdom
48. **Quantitative measurement of stress vs. strain in supported thin films by the layer compression test**
Aaron D. Sinnott, Trinity College Dublin, Ireland
49. **Microshear mechanical properties measurements on tribolayers**
Fadlallah Abouhadid, Ecole Centrale de Lyon, France
50. **How do H/E and H3/E2 control coating system wear? - Insights gained from elevated temperature nanoindentation, scratch and impact tests**
Ben D. Beake, Micro Materials Ltd, United Kingdom
51. **Fatigue behavior of gold thin films at elevated temperatures studied by bulge testing**
Anna Krapf, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
52. **Development of protocols to quantify the twinning stress of a CoCrFeMnNi high entropy alloy**
Camila Aguiar Teixeira, Karlsruhe Institute of Technology, Germany
53. **Hot hardness and yield stress measurements on stainless steel up to 700°C**
Bruno Passilly, Onera, France
54. **Thermomechanical fatigue and stress evolution of Cu metallization lines using FIB/SEM and synchrotron techniques**
Peter Imrich, KAI Kompetenzzentrum Automobil- & Industrieelektronik GmbH, Austria
55. **In-situ micromechanical testing of Su-8 polymer at high strain rates using indentation and micropillar compression**
Rahul Cherukuri, Tampere University, Finland
56. **High strain rate testing of ultra fine grained aluminium at micro and macro length scales**
Aloshious Lambai, Tampere University, Finland
57. **A geometry for quantitative analysis of interface fracture at the micron scale**
Eloho Okotete, Karlsruhe Institute of Technology, Germany
58. **Surface integrity evolution as a function of Dry-Electropolishing time on WC-Co**
Guiomar Riu, Steros GPA Innovative S.L., Spain
59. **Development of novel indentation-based stress relaxation tests to study transient plasticity in metals**
Suprit Purushottam Bhusare, University of Tampere, Finland

60. **Unveiling the mechanisms of motion of synchro-Shockley dislocations in Laves phases**
Zhuocheng Xie, RWTH Aachen University, Germany
61. **The restructuring of grain boundaries at the surfaces of meals**
John J. Boland, Trinity College Dublin, Ireland
62. **Nanoindentation strain rate jump test-based prediction of fracture and the brittle to ductile transition in tungsten**
Kevin Schmalbach, University of Minnesota, USA
63. **Micromechanical characterisation of protein crystals and filamentous microorganisms**
Achim Overbeck, Technische Universität Braunschweig, Institute for Particle Technology, Germany
64. **A novel indentation size effect analysis to quantify material damage for safer nuclear structural health monitoring**
Rohit Sharma, Coventry University, United Kingdom
65. **Nanoindentation-based strength measurements of spherical polymeric micro-samples**
Eduardo Rossi, Università degli Studi Roma Tre, Italy
66. **A simple method for pile-up correction by high-speed nanoindentation combined with optical profilometry**
Marco Sebastiani, Università degli studi Roma Tre, Italy
67. **Microstructural and mechanical characterization of yarns made from carbon nanotubes for the instrumentation of particle beams at CERN**
Ana Teresa Perez Fontenla, CERN, Switzerland
68. **Spherical indentation study on incipient plasticity of medium-/high-entropy alloys**
A-Hyun Jeon, Hanyang University, South Korea
69. **Alloy discovery via combinatorial and high-throughput synthesis and mechanical characterization**
Adie Alwen, University of Southern California, USA
70. **Mechanical behavior of optimized optical nanomultilayers**
Danielle White, University of Southern California, USA
71. **Nanomechanical behavior of biodegradable metallic glass for transient electrodes**
Seung-Kyun Kang, Seoul National University, South Korea
72. **Tailoring thin-film mechanical fragmentation properties of hybrid atomic/molecular-layer-deposited materials**
Ivo Utke, Empa, Laboratory for Mechanics of Materials and Nanostructures, Switzerland
73. **Measurement of hardness and elastic modulus by depth sensing indentation: Improvements to the technique based on continuous stiffness measurement**
Warren C. Oliver, KLA, USA

74. **Plasticity of the CaAl₂ phase and its change with Mg addition at room temperature**
Martina Freund, RWTH Aachen University, Institut für Metallkunde und Materialphysik,
Germany