

Papers published as an outcome of the NOMATEN's MAB PLUS/2018/8 grant

No.	Authors	Title	Periodic	Reference	Date (YYYY/MM)
1	A. Azarov, A. Kuznetsov	Energetics, migration and trapping of Zn interstitials in ZnO	Journal of Physics D: Applied Physics, 52, 485103	https://doi.org/10.1088/1361-6463/ab3eab https://www.duo.uio.no/handle/10852/86345	2019/08
2	A. Azarov, A. Galeckas, C. Mieszczyński, A. Hallén, A. Kuznetsov	Effects of annealing on photoluminescence and defect interplay in ZnO bombarded with heavy ions: crucial role of the ion dose	Journal of Applied Physics 127, 08 January 2020, 025701	https://doi.org/10.1063/1.5134011	2020/01
3	A. Zaborowska, Ł. Kurpaska, E. Wyszowska, M. Clozel, M. Vanazzi, F. Di Fonzo, M. Turek, I. Jóźwik, A. Kosińska, J. Jagielski	Influence of ion irradiation on the nanomechanical properties of thin alumina coatings deposited on 316L SS by PLD	Surface & Coatings Technology, Volume 386, 25 March 2020, 125491	https://doi.org/10.1016/j.surfcoat.2020.125491	2020/03
4	A. Kosińska, J. Jagielski, M. Wilczopolska, D. M. Bieliński, I. Jóźwik, Ł. Kurpaska, K. Nowakowska-Langier	Study of the electrical properties of ion irradiated polymer materials	Surface and Coatings Technology, Volume 38825, April 2020, 125562	https://doi.org/10.1016/j.surfcoat.2020.125562	2020/04
5	C. Mieszczyński, R. Ratajczak, J. Jagielski, G. Veliša, H. Bei, B. C. Sales, E. Wendler, W. J. Weber, Y. Zhang	Defect evolution in Ni and solid-solution alloys of NiFe and NiFeCoCr under ion irradiation at 16 and 300 K	Journal of Nuclear Materials, Volume 534, June 2020, 152138	https://doi.org/10.1016/j.jnucmat.2020.152138	2020/06
6	T. Mäkinen, J. Koivisto, E. Pääkkönen, J.A. Ketoja, M.J. Alava	Crossover from mean-field compression to collective phenomena in low-density foam-formed fiber material	Soft Matter, 16, 29, p. 6819-6825 (2020)	https://doi.org/10.1039/D0SM00286K	2020/06
7	M. Clozel, L. Kurpaska, I. Jóźwik, J. Jagielski, M. Turek, R. Diduszko, E. Wyszowska	Nanomechanical properties of low-energy Fe-ion implanted Eurofer97 and pure Fe	Surface and Coatings Technology Volume 393, 15 July 2020, 125833	https://doi.org/10.1016/j.surfcoat.2020.125833	2020/07
8	H. Salmenjoki, A. Lehtinen, L. Laurson, M. Alava	Plastic yielding and deformation bursts in the presence of disorder from coherent precipitates	Physical Review Materials, 4, 083602 (2020)	https://doi.org/10.1103/PhysRevMaterials.4.083602 https://arxiv.org/abs/2007.04724	2020/07
9	R. Ratajczak, C. Mieszczyński, S. Prucnal, T. A. Krajewski, E. Guzewicz, W. Wozniak, K. Kopalko, R. Heller, S. Akhmedaliev	Correlations between the structural transformations and concentration quenching effect for RE-implanted ZnO systems	Applied Surface Science, Volume 521, 15 August 2020, 146421	https://doi.org/10.1016/j.apsusc.2020.146421	2020/08
10	T. Mäkinen, J. Koivisto, L. Laurson, M. Alava	Scale-free features of temporal localization of deformation in late stages of creep failure	Physical Review Materials 4, 18 September 2020, 093606	https://doi.org/10.1103/PhysRevMaterials.4.093606	2020/09
11	L. Kurpaska, M. Frelek-Kozak, M.	Structural and mechanical properties of different types of	Journal of Molecular	https://doi.org/10.1016/j.molstruc.2020.128370	2020/10

	Wilczopolska, W. Bonicki, R. Diduszko, A. Zaborowska, E. Wyszkowska, M. Clozel, A. Kosinska, I. Cieslik, M. Duchna, I. Jozwik, W. Chmurzynski, G. Olszewski, B. Zajac,	graphite used in nuclear applications	Structure, Volume 1217, 5 October 2020, 128370		
12	T. Mäkinen, P. Karppinen, M. Ovaska, L. Laurson, M.J. Alava	Propagating bands of plastic deformation in a metal alloy as critical avalanches	Science Advances Volume 6, no. 41, 07 October 2020, eabc 7350	https://doi.org/10.1126/sciadv.abc7350	2020/10
13	H. Salmenjoki, L. Laurson, M. Alava	Probing the transition from dislocation jamming to pinning by machine learning	Materials Theory Volume 4, Article number: 5, 09 October 2020	https://doi.org/10.1186/s41313-020-00022-0	2020/10
14	L. Nowicki, J. Jagielski, C. Mieszczyński, K. Skrobas, P. Jóźwik, O. Dorosha	McChasy2: new Monte Carlo RBS/C simulation code designed for use with large crystalline structures	Nuclear Instruments and Methods in Physics Research Section B vol 498, pp 9-14	https://doi.org/10.1016/j.nimb.2021.04.004	2021/07
15	F. J. Dominguez-Gutierrez, J. Byggmästar, K. Nordlund, F. Djurabekova, U. von Toussaint	Computational study of crystal defects formation in Mo by machine learned molecular dynamics simulations	Modelling and Simulation in Materials Science and Engineering, 202	https://doi.org/10.1088/1361-651X/abf152	2021/04
16	M. Kalinowska, E. Gołębiewska, L. Mazur, H. Lewandowska, M. Pruszyński, G. Świdorski, M. Wyrwas, N. Pawluczuk, W. Lewandowski	Crystal structure, spectroscopic characterization, antioxidant and cytotoxic activity of new Mg(II) and Mn(II)/Na(I) complexes of isoferulic acid	Materials 2021, 14, 3236	https://doi.org/10.3390/ma14123236	

List of the scientific conferences for MAB PLUS/2018/8 grant

No.	Researcher	Paper/poster title	Name of the conference/ place/ hosting institution	Links (if any)	Date (YYYY/MM/DD)
1	Iwona Jóźwik	Low-voltage scanning electron microscopy - beyond sample topography	Invited lecture at Harvard University, John A. Paulson School of Engineering and Applied Sciences, Cambridge, MA, USA	https://events.seas.harvard.edu/event/low-voltage_scanning_electron_microscopy_-_beyond_sample_topography	06.03.2020
2	Iwona Jóźwik	Low-voltage scanning electron microscopy - beyond sample topography	Invited talk during Carl Zeiss Virtual FIB-SEM User Meeting, Bologna, Italy (on-line)	https://www.zeiss.it/microscopia/local-content/fibsem-user-meeting.html (Session 1 st , talk 3 rd – available online)	30.06.2020
3	Iwona Jóźwik	POSTER: New way of resistivity contrast imaging of semiconductor structures with	Microscopy Conference 2021, on-line	https://www.microscopy-conference.de/general-	22-26.08.2021

		ultra-low energy electrons		information/welcome-note	
4	F. Javier Dominguez et al.	Talk title: Modelling and simulations of high temperature nanoindentation of single-component metals and multi-component alloys.	VTT (invited talk)		30.03.2021
5	F. Javier Dominguez et al.	-	15th International Workshop on Hydrogen Isotopes in Fusion Reactor Materials	https://nfri2020.wixsite.com/15th-hws	27-28.05.2021
6	F. Javier Dominguez et al.	-	5th International Workshop on Models and Data for Plasma-Material Interaction in Fusion Devices (MoD-PMI 2021)	https://www.fz-juelich.de/conferences/PFMC-18/EN/MoD-PMI-2021/node.html	8-10.06.2021
7	F. Javier Dominguez et al.	Poster title: Understanding the temperature effects and chemical disorder through dislocation plasticity in MD simulations of nanoindentation	2021 Spring Meeting of the European Materials Research Society	https://www.european-mrs.com/advanced-small-scale-mechanical-characterization-strength-plasticity-fracture-and-fatigue-emrs	31.05-3.06.2021.
8	F. Javier Dominguez et al.	Poster-Talk title: The effect of sample temperature on the defect formation in crystalline W(111) by neutron induced collision cascades. Accepted for publication in Conference proceedings.	2021 Spring Meeting of the European Materials Research Society	https://www.european-mrs.com/new-developments-modeling-and-analysis-radiation-damage-materials-ii-emrs	31.05-3.06.2021
9	Fabrizio Rovaris	-	FENICS21/ Online / University of Cambridge	https://fenics2021.com/	22-26.03.2021
10	Fabrizio Rovaris	Simulation of dislocation dynamics in the presence of surfaces	Johannes Kepler University Linz, 19th Conference on Gettering and Defect Engineering in Semiconductor Technology	https://www.jku.at/en/institute-of-semiconductor-and-solid-state-physics/conferences/gadest-19-2021	September 2022
11	Agata Zaborowska	Absolute radiation tolerance of amorphous alumina coatings at room temperature	The 4th International Conference on Applied Surface Science (ICASS)		29.06.2021
12	Mikko Alava	Fracmeet-2021, invited talk "Fracture: extreme values, statistics, lifetimes"	"Understanding Material Failure: One Hundred Years of Griffith's theory", online, hosted by SRM University, India, 8-11 March		8-11.03.2021
13	Rene Alvarez Donado	Configurational entropy in High Entropy Alloys (HEAs)	Centre Européen de Calcul Atomique et Moléculaire (CECAM)	https://www.cecami.org/workshop-details/1019	5-7.01.2021