

Content

576-581	In Situ TEM and Molecular Dynamics Investigation of Grain Growth in Nanocrystalline Cu Nanoparticles <i>Lucia Bajtošová, Mia Myšičková, Nikoleta Štaffenová, Elena Chochoňáková, Jan Hanuš, Jan Fikar, Miroslav Cieslar</i>
582-588	Effect of Laser Shock Peening and Hot Isostatic Pressing on the Microstructure of MoNiCr Nickel Based Alloy <i>David Bricín, Zbyněk Špirit, Josef Strejčů, Antonín Kříž</i>
589-596	Strategy for Fabricating Tree-Like Branched Al-Al₂Cu Heterogeneous Nanostructures for Future Application in Battery Anodes <i>Elena Chochoňáková, Lucia Bajtošová, Nikoleta Štaffenová, Jan Hanuš, Peter Minárik, Miroslav Cieslar</i>
597-606	Elevator Vibrations and Ways to Reduce Them <i>Tereza Jarosova, Lenka Rychlikova, Blanka Skocilasova, Frantisek Klimenda</i>
607-617	Evaluation of Dimensional Accuracy and Surface Topography of Plastic Parts <i>Eva Jurickova, Stepan Kolomy, Josef Sedlak, Denisa Hrusecka, Petra Sliwkova, Jiri Vitek</i>
618-625	Hydrogen Embrittlement of Ferritic-Perlitic and Martenzitic Pipe Steels <i>Anna Knaislová, Jan Zmeko, Matěj Reiser, Nikola Macháček, Dalibor Vojtěch</i>
626-644	The Influence of Solidification Route on As-cast Microstructures of Al-Cu-Li-Mg-Zr-Sc Alloy <i>Rostislav Králík, Lucia Bajtošová, Barbora Kiboulou, Tomáš Krajňák, Miroslav Cieslar</i>
645-654	Push-Type Rotary Steering Mandrel Mechanical Analysis and Life Prediction <i>Wenzhe Li, Ye Chen, Jichuan Zhang, Xudong Wang, Pengcheng Wu, Chengyu Ma, Xiumei Wan, Xing Chen</i>
655-661	Experimental Investigation of the Effect of Fuel on Engine Oil Life <i>Pavol Mikuš, Alena Breznická, Marcel Kohutiar, Michal Krbaťa, Milan Jus, Lucia Kakošová, Jozef Fekiač</i>
662-669	Mechanical Alloying, an Innovative Way of Zinc Preparation for Biomaterial Applications <i>David Nečas, Jan Blažek, Jan Pokorný, Anna Boukalová, Jiří Kubásek</i>
670-677	Fast and Cost-effective Calibration Method of Assembly Errors on Rotary Axes of Five-axis Machine Tools <i>Yongqiang Pan, Yue Tang</i>
678-688	Airflow Resistivity Measurements of Acoustic Poroelastic Materials and their Influencing Factors <i>Attila Schweighardt, Balázs Vehovszky, Dániel Feszty</i>
689-697	Temperature Matters: Annealing Effects on Silver Protection and Tungsten Oxidation in W@Ag Core-Shell Powder <i>Angelina Strakošová, Pavel Lejček, Ilona Voňavková, Vojtěch Dalibor</i>
698-710	Experimental Measurement of Defects Propagation for a Passenger Car Tire Casing under Dynamic Loading <i>Ján Vavro jr., Ján Vavro, Lukáš Klimek, Miloš Taraba, Tomasz Domański, Zbigniew Saternus, Petra Dubcová</i>
711-719	Research on Optimization Design and Processing Technology of Engine Intake System Based on NX and Fluent <i>Jun Zhang, Ruqian Gao, Yangfang Wu</i>

Advisory Board
 Prof. hab. Dr. Stanislav Adamczak, MSc.
Politechnika Kielce, Poland
 Prof. Dana Bolibruchová, MSc. PhD.
UZ in Zilina, Slovakia
 Prof. Milan Brožek, MSc., Ph.D.
CULS in Prague, Czech
 Prof. Robert Čep, MSc., Ph.D.
VŠB TU of Ostrava, Czech
 Prof. Dr. M. Numan Durakbasa
Vienna University of Technology, Austria
 Prof. Berenika Hausnerova, MSc., Ph.D.
TBU in Zlin, Czech
 Prof. Dr. František Holešovský, MSc.
University of West Bohemia, Czech
 Prof. Jozef Janovec, Sc.D., MSc.
SUT in Bratislava, Slovakia
 Prof. h. c. Stanislav Legutko, MSc., Sc.D.
Politechnika Poznańska, Poland
 Prof. Antonin Kriz, MSc., Ph.D.
University of West Bohemia, Czech
 Prof. Pavel Kovac, MSc., Ph.D.
University of Novi Sad, Serbia
 Prof. Dr. János Kundrák, MSc., Sc.D.
University of Miskolc, Hungary
 Prof. dr hab. inż. Tomasz Lipiński
UWMazurski in Olsztynie, Poland
 Prof. Jan Mádl, MSc., Ph.D.
CTU in Prague, Czech
 Prof. Ioan D. Marinescu, Ph.D.
University of Toledo, USA
 Prof. Štefan Michna, MSc., Ph.D.
UJEP in Usti n. Labem, Czech
 Prof. Dr. Ivan Mrkvice, MSc.
VŠB TU of Ostrava, Czech
 Prof. Iva Nová, MSc., Ph.D.
TU in Liberec, Czech
 Prof. Pavel Novák, MSc., Ph.D.
ICHT in Prague, Czech
 Prof. Dr. Hitoshi Ohmori, MSc.
RIKEN, Japan
 Prof. Lubomír Šooš, MSc., Ph.D.
SUT in Bratislava, Slovakia
 Prof. Karol Vasilko, MSc., Sc.D., Dr. h. c.
FPT in Presov, TU in Kosice, Slovakia
 Prof. Dr. Dalibor Vojtěch, MSc.
ICHT in Prague, Czech
 Col. Assoc. Prof. Milan Chalupa, Ph.D.
UJEP in Usti n. Labem, Czech
 Assoc. Prof. Jan Řehoř, MSc., Ph.D.
University of West Bohemia, Czech
 Assoc. Prof. Dana Stancekova, MSc., Ph.D.
University of Zilina, Slovakia
 Assoc. Prof. Miroslava Tavodova, MSc., Ph.D.
TU of Zvolen, Slovakia
 Assoc. Prof. Jarmila Trpcevska, MSc., Ph.D.
TU of Kosice, Slovakia
 Dr. Michael N. Morgan
John Moores University, Great Britain
 Dr. Thomas Pearce
UWE Bristol, Great Britain

Editor-in-Chief

Assoc. Prof. Martin Novak, Eng. MSc., Ph.D.

Editor

Matyáš Grunt, BSc.

Editorial Office and Publisher Address

J. E. Purkyne University in Usti n. Labem
 Pasteurova 3334/7, 400 01 Usti n. Labem
 Czech Republic | VAT: CZ44555601
 e-mail: editors@journalmt.com

Print

PrintPoint Ltd, Prague

Published 6 p. a., 300 pcs., in November 2025
 146 pages

Permission: MK CRE 20470

ISSN 1213-2489 (print)

ISSN 2787-9402 (on-line)

<http://www.scopus.com>

<https://www.webofscience.com>