

Advanced machine learning and experimental studies of polypropylene based polyesters tribological composite systems for sustainable recycling automation and digitalization

Hussain, Abrar; Kübarsepp, Jakob; Sergejev, Fjodor; Goljandin, Dmitri; Hussainova, Irina; Podgurski, Vitali; Karjust, Kristo; Maurya, Himanshu Singh; Rahmani Ahranjani, Ramin; Sinka, Maris International journal of lightweight materials and manufacture 2025 / p. 252-263 <https://doi.org/10.1016/j.ijlmm.2024.11.001>

Axial and torsional buckling analysis of single- and multi-walled carbon nanotubes : finite element comparison between armchair and zigzag types

Rahmani Ahranjani, Ramin; Antonov, Maksim SN Applied Sciences 2019 / art. 1134, 13 p. : ill <https://doi.org/10.1007/s42452-019-1190-0>

Bioceramic scaffolds by additive manufacturing for controlled delivery of the antibiotic vancomycin

Kamboj, Nikhil Kumar; Rodriguez, Miguel Angel; Rahmani Ahranjani, Ramin; Prashanth, Konda Gokuldoss; Hussainova, Irina Proceedings of the Estonian Academy of Sciences 2019 / p. 185–190 : ill <https://doi.org/10.3176/proc.2019.2.10>
http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-185-190.pdf [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bioinspired and multifunctional tribological materials for sliding, erosive, machining, and energy-absorbing conditions : A review

Kumar, Rahul, 1993-; Rezapourianghahfarokhi, Mansoureh; Rahmani Ahranjani, Ramin; Maurya, Himanshu Singh; Kamboj, Nikhil Kumar; Hussainova, Irina Biomimetics 2024 / art. 209 <https://doi.org/10.3390/biomimetics9040209> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Combination of SLM-SPS approaches for tribological, antibacterial and biomaterial applications = Kombineeritud SLM-SPS meetod triboloogiliste, antibakteriaalsete ja biosobivate materjalide valmistamiseks

Rahmani Ahranjani, Ramin 2020 <https://digikogu.taltech.ee/et/Item/4cd6a755-29d9-4168-a281-a21edca6c729>

Comparison of mechanical and antibacterial properties of TiO₂/Ag ceramics and Ti6Al4V-TiO₂/Ag composite materials using combined SLM-SPS techniques

Rahmani Ahranjani, Ramin; Rosenberg, Merilin; Ivask, Angela; Kollo, Lauri Metals 2019 / art. 874, 13 p. : ill <https://doi.org/10.3390/met9080874> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

EBSD investigation of microstructure and microtexture evolution on additively manufactured TiC-Fe based cermets—Influence of multiple laser scanning

Maurya, Himanshu Singh; Vikram, R. J.; Kumar, Rahul, 1993-; Rahmani Ahranjani, Ramin; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Micron 2024 / art. 103613 <https://doi.org/10.1016/j.micron.2024.103613> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of lattice surface treatment on performance of hardmetal - titanium interpenetrating phase composites

Holovenko, Yaroslav; Kollo, Lauri; Saarna, Mart; Rahmani Ahranjani, Ramin; Soloviova, Tetiana; Antonov, Maksim; Prashanth, Konda Gokuldoss; Cygan, Slawomir; Veinthal, Renno International journal of refractory metals and hard materials 2020 / art. 105087, 10 p. : ill <https://doi.org/10.1016/j.jirmhm.2019.105087> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fabrication of localized diamond-filled copper structures via selective laser melting and spark plasma sintering

Rahmani Ahranjani, Ramin; Karimi, Javad; Kamboj, Nikhil; Kumar, Rahul, 1993-; Brojan, Miha; Tchórz, Adam; Skrabalak, Grzegorz; Lopes, Sergio Ivan Diamond and related materials 2023 / art. 109916 <https://doi.org/10.1016/j.diamond.2023.109916> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High virucidal potential of novel ceramic-metal composites fabricated via hybrid selective laser melting and spark plasma sintering routes

Rahmani Ahranjani, Ramin; Molan, Katja; Brojan, Miha; Prashanth, Konda Gokuldoss; Stopar, David The international journal of advanced manufacturing technology 2022 / p. 975-988 : ill <https://doi.org/10.1007/s00170-022-08878-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid metal-ceramic biomaterials fabricated through powder bed fusion and powder metallurgy for improved impact resistance of craniofacial implants

Rahmani Ahranjani, Ramin; Kamboj, Nikhil Kumar; Brojan, Miha; Antonov, Maksim; Prashanth, Konda Gokuldoss Materialia 2022 / art. 101465 <https://doi.org/10.1016/j.mtla.2022.101465> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Industrial sustainable fabrication, SEM characterization, mechanical testing, ANOVA analysis of PP-PETF recycled composites : artificial intelligence and deep learning studies for nuclear shielding applications

Hussain, Abrar; Goljandin, Dmitri; Podgurski, Vitali; Yörük, Can Rüstü; Sergejev, Fjodor; Kübarsepp, Jakob; Maurya, Himanshu Singh; Rahmani Ahranjani, Ramin European polymer journal 2024 / art. 113082 <https://doi.org/10.1016/j.eurpolymj.2024.113082> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Lightweight 3D printed Ti6Al4V-AlSi10Mg hybrid composite for impact resistance and armor piercing shielding

Rahmani Ahranjani, Ramin; Antonov, Maksim; Brojan, Miha Journal of materials research and technology 2020 / p. 13842-13854
: ill <https://doi.org/10.1016/j.jmrt.2020.09.108> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mechanical behavior of Ti6Al4V scaffolds filled with CaSiO₃ for implant applications

Rahmani Ahranjani, Ramin; Antonov, Maksim; Kollo, Lauri; Holovenko, Yaroslav; Prashanth, Konda Gokuldoss Applied sciences 2019 / art. 3844, 11 p. : ill <https://doi.org/10.3390/app9183844> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modelling of impact-abrasive wear of ceramic, metallic, and composite materials

Rahmani Ahranjani, Ramin; Antonov, Maksim; Kamboj, Nikhil Kumar Proceedings of the Estonian Academy of Sciences 2019 / p. 191–197 : ill <https://doi.org/10.3176/proc.2019.2.11> http://www.kirj.ee/public/proceedings_pdf/2019/issue_2/proc-2019-2-191-197.pdf [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Perspectives of metal-diamond composites additive manufacturing using SLM-SPS and other techniques for increased wear-impact resistance

Rahmani Ahranjani, Ramin; Brojan, Miha; Antonov, Maksim; Prashanth, Konda Gokuldoss International journal of refractory metals and hard materials 2020 / art. 105192, 13 p. : ill <https://doi.org/10.1016/j.ijrmhm.2020.105192> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Phi 6 bacteriophage inactivation by metal salts, metal powders, and metal surfaces

Molan, Katja; Rahmani Ahranjani, Ramin; Krklec, Daniel; Brojan, Miha; Stopar, David Viruses 2022 / art. 204
<https://doi.org/10.3390/v14020204> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser melting and spark plasma sintering: a perspective on functional biomaterials

Rahmani Ahranjani, Ramin; Lopes, Sergio Ivan; Prashanth, Konda Gokuldoss Journal of functional biomaterials 2023 / art. 521, 33 p. : ill <https://doi.org/10.3390/jfb14100521> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser melting of diamond-containing or postnitrided materials intended for impact-abrasive conditions: experimental and analytical study

Rahmani Ahranjani, Ramin; Antonov, Maksim; Kollo, Lauri Advances in materials science and engineering 2019 / art. 4210762 ; 11 p. : ill <https://doi.org/10.1155/2019/4210762> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser melting of in-situ CoCrFeMnNi high entropy alloy : effect of remelting

Karimi, Javad; Kollo, Lauri; Rahmani Ahranjani, Ramin; Ma, Pan; Jia, Yandong; Prashanth, Konda Gokuldoss Journal of Manufacturing Processes 2022 / p. 55-63 <https://doi.org/10.1016/j.jmapro.2022.09.056> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Selective laser sintered bio-inspired silicon-wollastonite scaffolds for bone tissue engineering

Kamboj, Nikhil Kumar; Kazantseva, Jekaterina; Rahmani Ahranjani, Ramin; Rodriguez, Miguel Angel; Hussainova, Irina Materials Science and Engineering : C 2020 / art. 111223 <https://doi.org/10.1016/j.msec.2020.111223>

Sliding Wear and Debris Evolution in LPBFed Ceramic-Reinforced Steel Composites Under Variable Loads and Temperatures

Maurya, Himanshu Singh; Kumar, Rahul, 1993-; Subramaniyan, Anand Kumar; Tarraste, Marek; Hussain, Abrar; Rahmani Ahranjani, Ramin; Juhani, Kristjan; Sergejev, Fjodor; Prashanth, Konda Gokuldoss Materials Chemistry and Physics 2025 / art. 131195 <https://doi.org/10.1016/j.matchemphys.2025.131195>

Solid lubrication at high-temperatures - a review

Kumar, Rahul, 1993-; Hussainova, Irina; Rahmani Ahranjani, Ramin; Antonov, Maksim Materials 2022 / art. 1695
<https://doi.org/10.3390/ma15051695> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Structural analysis of selective laser melted copper-tin alloy

Rahmani Ahranjani, Ramin; Resende, Pedro R.; Couto, Ruben; Lopes, Sérgio Ivan; Kumar, Rahul, 1993-; Maurya, Himanshu Singh; Karimi, Javad; Afonso, Alexandre M.; Hussain, Abrar; Abrantes, Joao C. C. Journal of alloys and metallurgical systems 2024 / art. 100097 <https://doi.org/10.1016/j.jalms.2024.100097> [Journal metrics at Scopus](#) [Article at Scopus](#)

The impact resistance of highly densified metal alloys manufactured from gas-atomized pre-alloyed powders

Rahmani Ahranjani, Ramin; Antonov, Maksim; Prashanth, Konda Gokuldoss Coatings 2021 / art. 216, 14 p. : ill
<https://doi.org/10.3390/coatings11020216> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

3D printing of plain and gradient cermets with efficient use of raw materials

Antonov, Maksim; Ivanov, Roman; Holovenko, Yaroslav; Goljandin, Dmitri; Rahmani Ahranjani, Ramin; Kollo, Lauri; Hussainova, Irina Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing

2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 239-245 : ill <https://doi.org/10.4028/www.scientific.net/KEM.799.239>
https://www.eester.ee/record=b5235278*est Conference proceeding at Scopus Article at Scopus

3D printing of plain and gradient cermets with efficient use of raw materials

Antonov, Maksim; Ivanov, Roman; Holovenko, Yaroslav; Goljandin, Dmitri; Rahmani Ahranjani, Ramin; Kollo, Lauri; Hussainova, Irina Cermets : aggregated book 2023 / p. 83-90 <https://doi.org/10.4028/b-j9Oly>

Tribological and circular economy aspects of polypropylene/cotton fibre hybrid composite

Hussain, Abrar; Podgurski, Vitali; Goljandin, Dmitri; Antonov, Maksim; Kumar, Rahul, 1993-; Kamboj, Nikhil Kumar; Rahmani Ahranjani, Ramin; Viljus, Mart; Ahmad, Tahir; Krumme, Andres; Krasnou, Illia Proceedings of the Estonian Academy of Sciences 2022 / p. 186-193 : ill <https://doi.org/10.3176/proc.2022.2.03> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Wear resistance of (Diamond-Ni)-Ti6Al4V gradient materials prepared by combined selective laser melting and spark plasma sintering techniques

Rahmani Ahranjani, Ramin; Antonov, Maksim; Kollo, Lauri Advances in tribology 2019 / art. 5415897, 12 p. : ill <https://doi.org/10.1155/2019/5415897> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS