

1. K. Siems, D. Müller, F. Mücklich, E. Grohmann, M. Laue, R. L. Mancinelli, J. Krause, R. Demets, N. Caplin, A. Koehler, A. Tortora, R. Hemmersbach, C. E. Hellweg, R. Moeller
Staphylococcus capitis subsp. capitis ISS isolate as a model organism for evaluating antimicrobial surfaces within the upcoming space flight experiment BIOFILMS
(2019)
2. S. M. Koch, K. Siems, D. Müller, F. Mücklich, E. Grohmann, R. L. Mancinelli, J. Krause, R. Demets, N. Caplin, A. Koehler, A. Tortora, R. Hemmersbach, C. E. Hellweg, R. Moeller
Wie können nanostrukturierte und bio-inspirierte Oberflächen zur Bekämpfung von gefährlichen Keimen beitragen?
(2019)
3. K. Siems, D. Müller, F. Mücklich, E. Grohmann, R. L. Mancinelli, J. Krause, R. Demets, N. Caplin, A. Koehler, A. Tortora, R. Hemmersbach, C. E. Hellweg, R. Moeller
Microbial biofilms in space--Evaluating copper-based antimicrobial surfaces in the upcoming ESA space experiment BIOFILMS
(2019)
4. D. Britz, Y. Steimer, F. Mücklich
A New Approach for Color Metallography: Through Controlled Conditions to Objective Microstructure Analysis of Low-Carbon Steels by LePera-Etching
(2019) 100 Years E04 Dev. Metallogr. Stand. ASTM International
DOI: 10.1520/STP160720170242
5. S. Suárez, R. Puyol, C. Schäfer, F. Mücklich
Carbon Nanotube-reinforced Metal Matrix Composites as Novel Electrodes for Low-voltage Switching Applications: A Surface Degradation Analysis
(2019) IEEE Holm Conf. Electr. Contacts, pp. 135–141
DOI: 10.1109/HOLM.2019.8923921
6. A. Borroto, S. Bruyère, S. Migot, J. F. Pierson, T. Gries, F. Mücklich, D. Horwat
Controlling surface morphology by nanocrystalline/amorphous competitive self-phase separation in thin films: Thickness-modulated reflectance and interference phenomena
(2019) Acta Mater. 181 78–86
DOI: 10.1016/j.actamat.2019.09.036
7. T. Jung, J. Görlitz, B. Kambs, C. Pauly, N. Raatz, R. Nelz, E. Neu, A. M. Edmonds, M. Markham, F. Mücklich, J. Meijer, C. Becher
Spin measurements of NV centers coupled to a photonic crystal cavity
(2019) APL Photonics. 4 120803
DOI: 10.1063/1.5120120
8. A. Rosenkranz, P. G. Grützmacher, K. Murzyn, C. Mathieu, F. Mücklich
Multi-scale surface patterning to tune friction under mixed lubricated conditions
(2019) Appl. Nanosci. 1–12
DOI: 10.1007/s13204-019-01055-9
9. A. Rosenkranz, P. G. Grützmacher, R. Espinoza, V. M. Fuenzalida, E. Blanco, N. Escalona, F. J. Gracia, R. Villarroel, L. Guo, R. Kang, F. Mücklich, S. Suárez, Z. Zhang
Multi-layer Ti3C2Tx-nanoparticles (MXenes) as solid lubricants--Role of surface terminations and intercalated water
(2019) Appl. Surf. Sci. 494 13–21
DOI: 10.1016/j.apsusc.2019.07.171

10. J. Luo, C. Hein, J.-F. Pierson, F. Mücklich
Early-stage corrosion, ion release, and the antibacterial effect of copper and cuprous oxide in physiological buffers: Phosphate-buffered saline vs Na-4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
(2019) *Biointerphases*. 14 61004
DOI: 10.1063/1.5123039
11. A. B. B. Chaar, B. Syed, T.-W. Hsu, M. Johansson-Jöesaar, J. M. Andersson, G. Henrion, L. J. S. Johnson, F. Mücklich, M. Odén
The Effect of Cathodic Arc Guiding Magnetic Field on the Growth of (TiO. 36AlO. 64) N Coatings
(2019) *Coatings*. 9 660
DOI: 10.3390/coatings9100660
12. J. Gola, J. Webel, D. Britz, A. Guitar, T. Staudt, M. Winter, F. Mücklich
Objective microstructure classification by support vector machine (SVM) using a combination of morphological parameters and textural features for low carbon steels
(2019) *Comput. Mater. Sci.* 160 186–196
DOI: 10.1016/j.commatsci.2019.01.006
13. P. G. Grützmacher, S. Rammacher, D. Rathmann, C. Motz, F. Mücklich, S. Suárez
Interplay between microstructural evolution and tribo-chemistry during dry sliding of metals
(2019) *Friction*. 7 637–650
DOI: 10.1007/s40544-019-0259-5
14. B. Lechthaler, G. Ochs, F. Mücklich, M. Dienwiebel
Evolution of the true contact area of laser textured tungsten under dry sliding conditions
(2019) *Front. Mech. Eng.* 5 3
DOI: 10.3389/fmech.2019.00003
15. P. G. Grützmacher, A. Rosenkranz, A. Szurdak, M. Grüber, C. Gachot, G. Hirt, F. Mücklich
Multi-scale surface patterning--an approach to control friction and lubricant migration in lubricated systems
(2019) *Ind. Lubr. Tribol*
DOI: 10.1108/ILT-07-2018-0273
16. K. M. Calamba, J. F. Pierson, S. Bruyère, A. L. Febvrier, P. Eklund, J. Barrirero, F. Mücklich, R. Boyd, M. P. Johansson Jöesaar, M. Odén
Dislocation structure and microstrain evolution during spinodal decomposition of reactive magnetron sputtered heteroepitaxial c-(TiO. 37, AlO. 63) N/c-TiN films grown on MgO (001) and (111) substrates
(2019) *J. Appl. Phys.* 125 105301
DOI: 10.1063/1.5051609
17. A. E. Giba, P. Pigeat, S. Bruyere, H. Rinnert, F. Soldera, F. Mücklich, R. Gago, D. Horwat
Ultraviolet to infrared downshifting in Ce and Yb co-doped aluminum oxynitride thin films
(2019) *J. Phys. D: Appl. Phys.* 52 285105
DOI: 10.1088/1361-6463/ab1830
18. J. Luo, C. Hein, J.-F. Pierson, F. Mücklich
Localised corrosion attacks and oxide growth on copper in phosphate-buffered saline
(2019) *Mater. Charact.* 158 109985
DOI: 10.1016/j.matchar.2019.109985
19. A. M. Manzoni, S. Haas, J. M. Yu, H. M. Daoud, U. Glatzel, H. Aboulfadl, F. Mücklich, R. Duran, G. Schmitz, D.M. Többens, S. Matsumura, F. Vogel, N. Wanderka
Evolution of γ/γ' phases, their misfit and volume fractions in Al₁₀Co₂₅Cr₈Fe₁₅Ni₃₆Ti₆ compositionally complex alloy
(2019) *Mater. Charact.* 154 363–376
DOI: 10.1016/j.matchar.2019.06.009

20. H. Aboulfadl, F. Seifried, M. Stueber, F. Mücklich
Interdiffusion in as-deposited Ni/Ti multilayer thin films analyzed by atom probe tomography
(2019) *Mater. Lett.* 236 92–95.
DOI: 10.1016/j.matlet.2018.10.085
21. H. Aboulfadl, F. Mücklich
Atomic-scale characterization of diffusion kinetics in Ru/Al multilayer thin films
(2019) *Mater. Lett.* 254 344–347
DOI: 10.1016/j.matlet.2019.07.102
22. F. Forouzan, L. Borasi, E. Vuorinen, F. Mücklich
Process control maps to design an ultra-high strength-ductile steel
(2019) *Mater. Sci. Technol.* 35 1173–1184
DOI: 10.1080/02670836.2019.1615752
23. J. Luo, C. Hein, J. Ghanbaja, J.-F. Pierson, F. Mücklich
Bacteria accumulate copper ions and inhibit oxide formation on copper surface during antibacterial efficiency test
(2019) *Micron.* 127 102759
DOI: 10.1016/j.micron.2019.102759
24. M. A. Guitar, A. Scheid, D. Britz, F. Mücklich
Evaluation of the etching process for analysis of secondary carbides in HCCl by optical and confocal laser microscopy
(2019) *Practical Metallography* 56 246–261
DOI: 10.3139/147.110570
25. J. Barrirero, M. Engstler, M. Odén, F. Mücklich
Phase selective sample preparation of Al-Si alloys for Atom Probe Tomography
(2019) *Pract. Metallogr.* 56 76–90
DOI: 10.3139/147.110557
26. K. Pratama, F. Kunz, L. Lindner, J. Schmauch, F. Mücklich, C. Motz
Thermal stability, phase decomposition, and micro-fatigue properties of pulsed electrodeposited nanocrystalline Co-Cu
(2019) *Procedia Struct. Integr.* 23 366–371
DOI: 10.1016/j.prostr.2020.01.114
27. J. Luksch, A. Jung, C. Pauly, C. Motz, F. Mücklich, F. Schaefer
Effect of Pretreatment on Interface Stability and Morphology of Ni/Al Hybrid Foams by in situ Microcantilever Fracture Experiment
(2019) *Procedia Struct. Integr.* 17 206–213
DOI: 10.1016/j.prostr.2019.08.028
28. J. Barrirero, C. Pauly, M. Engstler, J. Ghanbaja, N. Ghafoor, J. Li, P. Schumacher, M. Odén, F. Mücklich
Eutectic modification by ternary compound cluster formation in Al-Si alloys
(2019) *Sci. Rep.* 9 1–10
DOI: 10.1038/s41598-019-41919-2
29. F. Forouzan, L. Borasi, E. Vuorinen, F. Mücklich
Optimization of quenching temperature to minimize the micro segregation induced banding phenomena in quenching and partitioning (Q&P) steels
(2019) *Steel Res. Int.* 90 1800281
DOI: 10.1002/srin.201800281

30. K. M. Calamba, J. Barrirero, M. P. J. Jöesaar, S. Bruyère, R. Boyd, J. F. Pierson, A. Le Febvrier, F. Mücklich, M. Odén
Growth and high temperature decomposition of epitaxial metastable wurtzite (Ti_{1-x}, Al_x) N (0001) thin films
(2019) Thin Solid Films. 688 137414
DOI: 10.1016/j.tsf.2019.137414
31. M. Marian, P. Grützmacher, A. Rosenkranz, S. Tremmel, F. Mücklich, S. Wartzack
Designing surface textures for EHL point-contacts-Transient 3D simulations, meta-modeling and experimental validation
(2019) Tribol. Int. 137 152–163
DOI: 10.1016/j.triboint.2019.03.052
32. K. Aristizabal, A. Katzensteiner, M. Leoni, F. Mücklich, S. Suárez
Evolution of the lattice defects and crystalline domain size in carbon nanotube metal matrix composites processed by severe plastic deformation
(2019) Materials Characterization
DOI: 10.1016/j.matchar.2019.06.019
33. I. El Azhari, J. Barrirero, J. Garcia, F. Soldera, L. Llanes, F. Mücklich
Atom Probe Tomography Investigations on Grain Boundary Segregation in Polycrystalline Ti(C, N) and Zr(C, N) CVD Coatings
(2019) Scripta Materialia, 162, pp. 335-340
DOI: 10.1016/j.scriptamat.2018.11.041
34. C. de Melo, M. Jullien, Y. Battie, A. En Naciri, J. Ghanbaja, F. Montaigne, J.-F. Pierson, F. Rigoni, N. Almqvist, A. Vomiero, S. Migot, F. Mücklich, D. Horwat
Semi-transparent p-Cu₂O/n-ZnO nanoscale-film heterojunctions for photodetection and photovoltaic applications
(2019) ACS Appl. Nano Mater. 2 4358–4366
DOI: 10.1021/acsnm.9b00808