

Bart Raeymaekers

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

1,605
citations

218677

26
h-index

315739

38
g-index

60
all docs

60
docs citations

60
times ranked

1359
citing authors

#	ARTICLE	IF	CITATIONS
1	Relating the surface topography of as-built Inconel 718 surfaces to laser powder bed fusion process parameters using multivariate regression analysis. <i>Precision Engineering</i> , 2022, 74, 303-315.	3.4	11
2	Using supervised machine learning methods to predict microfiber alignment and electrical conductivity of polymer matrix composite materials fabricated with ultrasound directed self-assembly and stereolithography. <i>Computational Materials Science</i> , 2022, 206, 111233.	3.0	11
3	The effect of medium viscosity and particle volume fraction on ultrasound directed self-assembly of spherical microparticles. <i>Journal of Applied Physics</i> , 2022, 131, .	2.5	3
4	A General Load-Displacement Relationship Between Random Rough Surfaces in Elastic, Non-adhesive Contact, with Application in Metal Additive Manufacturing. <i>Tribology Letters</i> , 2022, 70, .	2.6	7
5	Additive Manufacturing of Polymer Matrix Composite Materials with Aligned or Organized Filler Material: A Review. <i>Advanced Engineering Materials</i> , 2021, 23, 2001002.	3.5	38
6	Wave-Driven Assembly of Quasiperiodic Patterns of Particles. <i>Physical Review Letters</i> , 2021, 126, 145501.	7.8	7
7	Soft EHL Simulations of Lubricant Film Thickness in Textured Hard-on-Soft Bearings Considering Different Cavitation Models, in the Context of Prosthetic Hip Implants. <i>Tribology Letters</i> , 2021, 69, 1.	2.6	8
8	Combining ultrasound directed self-assembly and stereolithography to fabricate engineered polymer matrix composite materials with anisotropic electrical conductivity. <i>Composites Part B: Engineering</i> , 2021, 223, 109096.	12.0	21
9	The Effect of Texture Floor Profile on the Lubricant Film Thickness in a Textured Hard-On-Soft Bearing With Relevance to Prosthetic Hip Implants. <i>Journal of Tribology</i> , 2021, 143, 021801.	1.9	9
10	Surface Texturing of Prosthetic Hip Implant Bearing Surfaces: A Review. <i>Journal of Tribology</i> , 2021, 143, 040801.	1.9	38
11	Manufacturing bioinspired flexible materials using ultrasound directed self-assembly and 3D printing. <i>Materials and Design</i> , 2020, 185, 108243.	7.0	29
12	Quantifying macro- and microscale alignment of carbon microfibers in polymer-matrix composite materials fabricated using ultrasound directed self-assembly and 3D-printing. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 129, 105713.	7.6	18
13	Arranging Ellipsoidal Particles in Three-Dimensional User-Specified Orientations with Ultrasound-Directed Self-Assembly. <i>Physical Review Applied</i> , 2020, 14, .	3.8	5
14	3D ultrasound directed self-assembly of high aspect ratio particles: On the relationship between the number of transducers and their spatial arrangement. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	4
15	Ultrasound freeze-casting of a biomimetic layered microstructure in epoxy-ceramic composite materials to increase strength and hardness. <i>Materialia</i> , 2020, 12, 100754.	2.7	12
16	Maximizing the Lubricant Film Thickness Between a Rigid Microtextured and a Smooth Deformable Surface in Relative Motion, Using a Soft Elasto-Hydrodynamic Lubrication Model. <i>Journal of Tribology</i> , 2020, 142, 071802.	1.9	9
17	Aligning High-Aspect-Ratio Particles in User-Specified Orientations with Ultrasound-Directed Self-Assembly. <i>Physical Review Applied</i> , 2019, 12, .	3.8	20
18	Mechanisms driving high-cycle fatigue life of as-built Inconel 718 processed by laser powder bed fusion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 761, 137993.	5.6	51

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19	Polymer Spreading on Unidirectionally Nanotextured Substrates Using Molecular Dynamics. <i>Langmuir</i> , 2019, 35, 8784-8789.	3.5	0
20	Ultrasound freeze casting: Fabricating bioinspired porous scaffolds through combining freeze casting and ultrasound directed self-assembly. <i>Materials and Design</i> , 2019, 164, 107561.	7.0	37
21	Polymer spreading on substrates with nanoscale grooves using molecular dynamics. <i>Nanotechnology</i> , 2019, 30, 095701.	2.6	3
22	Predicting the polyethylene wear rate in pin-on-disc experiments in the context of prosthetic hip implants: Deriving a data-driven model using machine learning methods. <i>Tribology International</i> , 2019, 133, 101-110.	5.9	41
23	Ultrasound directed self-assembly processing of nanocomposite materials with ultra-high carbon nanotube weight fraction. <i>Journal of Composite Materials</i> , 2019, 53, 1329-1336.	2.4	20
24	Microtextured CoCrMo alloy for use in metal-on-polyethylene prosthetic joint bearings: Multi-directional wear and corrosion measurements. <i>Tribology International</i> , 2018, 124, 178-183.	5.9	34
25	Ultrasound Noncontact Particle Manipulation of Three-dimensional Dynamic User-specified Patterns of Particles in Air. <i>Physical Review Applied</i> , 2018, 10, .	3.8	36
26	Friction between a polyethylene pin and a microtextured CoCrMo disc, and its correlation to polyethylene wear, as a function of sliding velocity and contact pressure, in the context of metal-on-polyethylene prosthetic hip implants. <i>Tribology International</i> , 2018, 127, 568-574.	5.9	21
27	Spreading Kinetics of Ultrathin Liquid Films Using Molecular Dynamics. <i>Langmuir</i> , 2017, 33, 3476-3483.	3.5	11
28	Using a patterned microtexture to reduce polyethylene wear in metal-on-polyethylene prosthetic bearing couples. <i>Wear</i> , 2017, 392-393, 77-83.	3.1	37
29	Quantifying adhesion of ultra-thin multi-layer DLC coatings to Ni and Si substrates using shear, tension, and nanoscratch molecular dynamics simulations. <i>Acta Materialia</i> , 2017, 141, 317-326.	7.9	20
30	3D Printing Macroscale Engineered Materials Using Ultrasound Directed Self-Assembly and Stereolithography. <i>Advanced Materials Technologies</i> , 2017, 2, 1700122.	5.8	69
31	Ultrasound directed self-assembly of three-dimensional user-specified patterns of particles in a fluid medium. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	45
32	Ultrasound directed self-assembly of user-specified patterns of nanoparticles dispersed in a fluid medium. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	51
33	Comparing surface topography parameters of rough surfaces obtained with spectral moments and deterministic methods. <i>Tribology International</i> , 2016, 93, 137-141.	5.9	51
34	Using a surrogate contact pair to evaluate polyethylene wear in prosthetic knee joints. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016, 104, 133-140.	3.4	6
35	An experimental approach to determining fatigue crack size in polyethylene tibial inserts. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 54, 106-114.	3.1	6
36	Terraced spreading of nanometer-thin lubricant using molecular dynamics. <i>Polymer</i> , 2016, 84, 286-292.	3.8	6

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37	Qualitative Evaluation of Ultra-thin Multi-layer Diamond-Like Carbon Coatings Using Molecular Dynamics Nanoindentation Simulations. <i>Tribology Letters</i> , 2016, 62, 1.	2.6	15
38	The load-carrying capacity and friction coefficient of incompressible textured parallel slider bearings with surface roughness inside the texture features. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2015, 229, 547-556.	1.8	16
39	Deformation of Ultra-Thin Diamond-Like Carbon Coatings Under Combined Loading on a Magnetic Recording Head. <i>Tribology Letters</i> , 2015, 57, 1.	2.6	4
40	Implementation of optical dielectric metamaterials: A review. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015, 158, 3-16.	2.3	33
41	Quantifying lubricant droplet spreading on a flat substrate using molecular dynamics. <i>Applied Physics Letters</i> , 2014, 105, 151601.	3.3	8
42	Dynamic behavior of microscale particles controlled by standing bulk acoustic waves. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	14
43	Aligning carbon nanotubes using bulk acoustic waves to reinforce polymer composites. <i>Composites Part B: Engineering</i> , 2014, 60, 91-97.	12.0	50
44	The effect of polyethylene creep on tibial insert locking screw loosening and back-out in prosthetic knee joints. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 38, 1-5.	3.1	1
45	A patterned microtexture to reduce friction and increase longevity of prosthetic hip joints. <i>Wear</i> , 2014, 315, 51-57.	3.1	67
46	The accuracy of the compressible Reynolds equation for predicting the local pressure in gas-lubricated textured parallel slider bearings. <i>Tribology International</i> , 2014, 72, 83-89.	5.9	26
47	Designing prosthetic knee joints with bio-inspired bearing surfaces. <i>Tribology International</i> , 2014, 77, 106-110.	5.9	36
48	A composite index to quantify dispersion of carbon nanotubes in polymer-based composite materials. <i>Composites Part B: Engineering</i> , 2013, 55, 16-21.	12.0	45
49	A hybrid apparatus for friction and accelerated wear testing of total knee replacement bearing materials. <i>Wear</i> , 2013, 308, 54-60.	3.1	6
50	The effect of texture shape on the friction coefficient and stiffness of gas-lubricated parallel slider bearings. <i>Tribology International</i> , 2013, 67, 278-288.	5.9	108
51	Tuning near-field thermal radiative properties by quantifying sensitivity of Mie resonance-based metamaterial design parameters. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 129, 277-286.	2.3	25
52	The Effect of Determining Topography Parameters on Analyzing Elastic Contact Between Isotropic Rough Surfaces. <i>Journal of Tribology</i> , 2013, 135, .	1.9	47
53	Continuous and unconstrained manipulation of micro-particles using phase-control of bulk acoustic waves. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	37
54	The Effect of Texture Shape on the Load-Carrying Capacity of Gas-Lubricated Parallel Slider Bearings. <i>Tribology Letters</i> , 2012, 48, 315-327.	2.6	110

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55	Creating a collimated ultrasound beam in highly attenuating fluids. Ultrasonics, 2012, 52, 564-570.	3.9	2
56	Manipulation of diamond nanoparticles using bulk acoustic waves. Journal of Applied Physics, 2011, 109, .	2.5	73
57	The influence of operating and design parameters on the magnetic tape/guide friction coefficient. Tribology Letters, 2007, 25, 161-171.	2.6	8
58	Enhancing tribological performance of the magnetic tape/guide interface by laser surface texturing. Tribology Letters, 2007, 27, 89-95.	2.6	45
59	A Model for Magnetic Tape/Guide Friction Reduction by Laser Surface Texturing. Tribology Letters, 2007, 28, 9-17.	2.6	33
60	Manufacturing for the Masses: A Novel Concept for Consumer 3D Printer Networks in the Context of Crisis Relief. Advanced Intelligent Systems, 0, , 2100121.	6.1	1