

# 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	The Effect of Texture Shape on the Load-Carrying Capacity of Gas-Lubricated Parallel Slider Bearings. Tribology Letters, 2012, 48, 315-327.	2.6	110
2	The effect of texture shape on the friction coefficient and stiffness of gas-lubricated parallel slider bearings. Tribology International, 2013, 67, 278-288.	5.9	108
3	Manipulation of diamond nanoparticles using bulk acoustic waves. Journal of Applied Physics, 2011, 109, .	2.5	73
4	3D Printing Macroscale Engineered Materials Using Ultrasound Directed Self-Assembly and Stereolithography. Advanced Materials Technologies, 2017, 2, 1700122.	5.8	69
5	A patterned microtexture to reduce friction and increase longevity of prosthetic hip joints. Wear, 2014, 315, 51-57.	3.1	67
6	Ultrasound directed self-assembly of user-specified patterns of nanoparticles dispersed in a fluid medium. Applied Physics Letters, 2016, 108, .	3.3	51
7	Comparing surface topography parameters of rough surfaces obtained with spectral moments and deterministic methods. Tribology International, 2016, 93, 137-141.	5.9	51
8	Mechanisms driving high-cycle fatigue life of as-built Inconel 718 processed by laser powder bed fusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 761, 137993.	5.6	51
9	Aligning carbon nanotubes using bulk acoustic waves to reinforce polymer composites. Composites Part B: Engineering, 2014, 60, 91-97.	12.0	50
10	The Effect of Determining Topography Parameters on Analyzing Elastic Contact Between Isotropic Rough Surfaces. Journal of Tribology, 2013, 135, .	1.9	47
11	Enhancing tribological performance of the magnetic tape/guide interface by laser surface texturing. Tribology Letters, 2007, 27, 89-95.	2.6	45
12	A composite index to quantify dispersion of carbon nanotubes in polymer-based composite materials. Composites Part B: Engineering, 2013, 55, 16-21.	12.0	45
13	Ultrasound directed self-assembly of three-dimensional user-specified patterns of particles in a fluid medium. Journal of Applied Physics, 2017, 121, .	2.5	45
14	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. Tribology International, 2019, 133, 101-110.	5.9	41
15	Additive Manufacturing of Polymer Matrix Composite Materials with Aligned or Organized Filler Material: A Review. Advanced Engineering Materials, 2021, 23, 2001002.	3.5	38
16	Surface Texturing of Prosthetic Hip Implant Bearing Surfaces: A Review. Journal of Tribology, 2021, 143, 040801.	1.9	38
17	Continuous and unconstrained manipulation of micro-particles using phase-control of bulk acoustic waves. Applied Physics Letters, 2013, 103, .	3.3	37
18	Using a patterned microtexture to reduce polyethylene wear in metal-on-polyethylene prosthetic bearing couples. Wear, 2017, 392-393, 77-83.	3.1	37

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19	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
20	Designing prosthetic knee joints with bio-inspired bearing surfaces. <i>Tribology International</i> , 2014, 77, 106-110.	5.9	36
21	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
22	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
23	A Model for Magnetic Tape/Guide Friction Reduction by Laser Surface Texturing. <i>Tribology Letters</i> , 2007, 28, 9-17.	2.6	33
24	Implementation of optical dielectric metamaterials: A review. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015, 158, 3-16.	2.3	33
25	Manufacturing bioinspired flexible materials using ultrasound directed self-assembly and 3D printing. <i>Materials and Design</i> , 2020, 185, 108243.	7.0	29
26	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
27	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
28	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
29	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
30	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
31	Aligning High-Aspect-Ratio Particles in User-Specified Orientations with Ultrasound-Directed Self-Assembly. <i>Physical Review Applied</i> , 2019, 12, .	3.8	20
32	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
33	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
34	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
35	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
36	Dynamic behavior of microscale particles controlled by standing bulk acoustic waves. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	14

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37	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
38	Spreading Kinetics of Ultrathin Liquid Films Using Molecular Dynamics. <i>Langmuir</i> , 2017, 33, 3476-3483.	3.5	11
39	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
40	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
41	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
42	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
43	The influence of operating and design parameters on the magnetic tape/guide friction coefficient. <i>Tribology Letters</i> , 2007, 25, 161-171.	2.6	8
44	Quantifying lubricant droplet spreading on a flat substrate using molecular dynamics. <i>Applied Physics Letters</i> , 2014, 105, 151601.	3.3	8
45	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
46	Wave-Driven Assembly of Quasiperiodic Patterns of Particles. <i>Physical Review Letters</i> , 2021, 126, 145501.	7.8	7
47	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
48	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
49	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
50	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
51	Terraced spreading of nanometer-thin lubricant using molecular dynamics. <i>Polymer</i> , 2016, 84, 286-292.	3.8	6
52	Arranging Ellipsoidal Particles in Three-Dimensional User-Specified Orientations with Ultrasound-Directed Self-Assembly. <i>Physical Review Applied</i> , 2020, 14, .	3.8	5
53	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
54	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

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55	Polymer spreading on substrates with nanoscale grooves using molecular dynamics. Nanotechnology, 2019, 30, 095701.	2.6	3
56	The effect of medium viscosity and particle volume fraction on ultrasound directed self-assembly of spherical microparticles. Journal of Applied Physics, 2022, 131, .	2.5	3
57	Creating a collimated ultrasound beam in highly attenuating fluids. Ultrasonics, 2012, 52, 564-570.	3.9	2
58	The effect of polyethylene creep on tibial insert locking screw loosening and back-out in prosthetic knee joints. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 38, 1-5.	3.1	1
59	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
60	Polymer Spreading on Unidirectionally Nanotextured Substrates Using Molecular Dynamics. Langmuir, 2019, 35, 8784-8789.	3.5	0