

Orhun K Muratoglu

List of Publications by Year in descending order

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84
papers

2,012
citations

257357

24
h-index

276775

41
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88
all docs

88
docs citations

88
times ranked

1331
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of Unicompartmental Knee Arthroplasty in a Community-Based Implant Registry. <i>Clinical Orthopaedics and Related Research</i> , 2003, 416, 111-119.	0.7	179
2	Knee-simulator testing of conventional and cross-linked polyethylene tibial inserts. <i>Journal of Arthroplasty</i> , 2004, 19, 887-897.	1.5	119
3	Ex Vivo Stability Loss of Irradiated and Melted Ultra-High Molecular Weight Polyethylene. <i>Journal of Bone and Joint Surgery - Series A</i> , 2010, 92, 2809-2816.	1.4	89
4	Surface analysis of early retrieved acetabular polyethylene liners. <i>Journal of Arthroplasty</i> , 2004, 19, 68-77.	1.5	85
5	Optical analysis of surface changes on early retrievals of highly cross-linked and conventional polyethylene tibial inserts. <i>Journal of Arthroplasty</i> , 2003, 18, 42-47.	1.5	70
6	Gradient crosslinking of UHMWPE using irradiation in molten state for total joint arthroplasty. <i>Biomaterials</i> , 2002, 23, 717-724.	5.7	69
7	POLYETHYLENE DAMAGE IN TOTAL KNEES AND USE OF HIGHLY CROSSLINKED POLYETHYLENE. <i>Journal of Bone and Joint Surgery - Series A</i> , 2003, 85, 7-13.	1.4	68
8	Detecting total hip replacement prosthesis design on plain radiographs using deep convolutional neural network. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1465-1471.	1.2	66
9	Aggressive Wear Testing of a Cross-Linked Polyethylene in Total Knee Arthroplasty. <i>Clinical Orthopaedics and Related Research</i> , 2002, 404, 89-95.	0.7	62
10	Simulated Normal Gait Wear Testing of a Highly Cross-Linked Polyethylene Tibial Insert. <i>Journal of Arthroplasty</i> , 2007, 22, 435-444.	1.5	56
11	Lower prosthesis-specific 10-year revision rate with crosslinked than with non-crosslinked polyethylene in primary total knee arthroplasty. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2015, 86, 721-727.	1.2	56
12	Knee Simulator Wear of Polyethylene Tibias Articulating against Explanted Rough Femoral Components. <i>Clinical Orthopaedics and Related Research</i> , 2004, 428, 108-113.	0.7	50
13	Vitamin E-Diffused Highly Cross-Linked UHMWPE Particles Induce Less Osteolysis Compared to Highly Cross-Linked Virgin UHMWPE Particles In Vivo. <i>Journal of Arthroplasty</i> , 2014, 29, 232-237.	1.5	44
14	Identification and quantification of irradiation in UHMWPE throughtrans-vinylene yield. <i>Journal of Biomedical Materials Research Part B</i> , 2001, 56, 584-592.	3.0	43
15	Metrology to Quantify Wear and Creep of Polyethylene Tibial Knee Inserts. <i>Clinical Orthopaedics and Related Research</i> , 2003, 410, 155-164.	0.7	42
16	Natural language processing with deep learning for medical adverse event detection from free-text medical narratives: A case study of detecting total hip replacement dislocation. <i>Computers in Biology and Medicine</i> , 2021, 129, 104140.	3.9	42
17	Ex Vivo Wear of Conventional and Cross-linked Polyethylene Acetabular Liners. <i>Clinical Orthopaedics and Related Research</i> , 2005, &NA;, 158-164.	0.7	41
18	Regaining Native Knee Kinematics Following Joint Arthroplasty: A Novel Biomimetic Design with ACL and PCL Preservation. <i>Journal of Arthroplasty</i> , 2015, 30, 2143-2148.	1.5	41

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19	Assessing the utility of deep neural networks in predicting postoperative surgical complications: a retrospective study. <i>The Lancet Digital Health</i> , 2021, 3, e471-e485.	5.9	41
20	Investigation of surgically retrieved, vitamin E-stabilized, crosslinked UHMWPE implants after short-term <i>in vivo</i> service. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016, 104, 1132-1140.	1.6	35
21	Effects of vitamin E-diffused highly cross-linked UHMWPE particles on inflammation, apoptosis and immune response against <i>S.Âureus</i> . <i>Biomaterials</i> , 2017, 143, 46-56.	5.7	33
22	Cruciate Retaining Implant With Biomimetic Articular Surface to Reproduce Activity Dependent Kinematics of the Normal Knee. <i>Journal of Arthroplasty</i> , 2015, 30, 2149-2153.e2.	1.5	31
23	Effects of simulated oxidation on the <i>in vitro</i> wear and mechanical properties of irradiated and melted highly crosslinked UHMWPE. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016, 104, 316-322.	1.6	31
24	Durability of Highly Cross-Linked Polyethylene in Total Hip and Total Knee Arthroplasty. <i>Orthopedic Clinics of North America</i> , 2015, 46, 321-327.	0.5	27
25	In Vivo Oxidative Stability Changes of Highly Cross-Linked Polyethylene Bearings: An Ex Vivo Investigation. <i>Journal of Arthroplasty</i> , 2015, 30, 1828-1834.	1.5	24
26	Comparing the performance of a deep convolutional neural network with orthopedic surgeons on the identification of total hip prosthesis design from plain radiographs. <i>Medical Physics</i> , 2021, 48, 2327-2336.	1.6	24
27	Early Lessons From a Worldwide, Multicenter, Followup Study of the Recalled Articular Surface Replacement Hip System. <i>Clinical Orthopaedics and Related Research</i> , 2016, 474, 166-174.	0.7	22
28	Ceramic bearings for total hip arthroplasty are associated with a reduced risk of revision for infection. <i>HIP International</i> , 2018, 28, 222-226.	0.9	21
29	Fatigue toughness of irradiated vitamin E/UHMWPE blends. <i>Journal of Orthopaedic Research</i> , 2016, 34, 1514-1520.	1.2	20
30	Longitudinal Model of Periprosthetic Joint Infection in the Rat. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1101-1112.	1.2	20
31	Deep Learning in Orthopedics: How Do We Build Trust in the Machine?. <i>Healthcare Transformation</i> , 0, , .	0.4	20
32	The use of trans-vinylene formation in quantifying the spatial distribution of electron beam penetration in polyethylene. Single-sided, double-sided and shielded irradiation. <i>Biomaterials</i> , 2003, 24, 2021-2029.	5.7	19
33	Analysis of Dual Mobility Liner Rim Damage Using Retrieved Components and Cadaver Models. <i>Journal of Arthroplasty</i> , 2016, 31, 1595-1602.	1.5	16
34	Reverse Engineering Nature to Design Biomimetic Total Knee Implants. <i>Journal of Knee Surgery</i> , 2015, 28, 363-369.	0.9	14
35	Are Females at Greater Risk for Revision Surgery After Hip Resurfacing Arthroplasty With the Articular Surface Replacement Prosthesis?. <i>Clinical Orthopaedics and Related Research</i> , 2016, 474, 2257-2265.	0.7	14
36	Peroxide cross-linked UHMWPE blended with vitamin E. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2017, 105, 1379-1389.	1.6	14

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37	The Cobalt/Chromium Ratio Provides Similar Diagnostic Value to a Low Cobalt Threshold in Predicting Adverse Local Tissue Reactions in Patients With Metal-on-Metal Hip Arthroplasty. <i>Journal of Arthroplasty</i> , 2018, 33, 3020-3024.	1.5	14
38	Increased oxidative protection by high active vitamin E content and partial radiation crosslinking of UHMWPE. <i>Journal of Orthopaedic Research</i> , 2018, 36, 1860-1867.	1.2	14
39	ACL substitution may improve kinematics of PCL-retaining total knee arthroplasty. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2018, 26, 1445-1454.	2.3	14
40	Delivery of bupivacaine from UHMWPE and its implications for managing pain after joint arthroplasty. <i>Acta Biomaterialia</i> , 2019, 93, 63-73.	4.1	14
41	Scoring the Current Risk Stratification Guidelines in Follow-up Evaluation of Patients After Metal-on-Metal Hip Arthroplasty. <i>Journal of Bone and Joint Surgery - Series A</i> , 2016, 98, 1905-1912.	1.4	13
42	In vitro oxidation model for UHMWPE incorporating synovial fluid lipids. <i>Journal of Orthopaedic Research</i> , 2018, 36, 1833-1839.	1.2	13
43	Antimicrobial effect of anesthetic-eluting ultra-high molecular weight polyethylene for post-arthroplasty antibacterial prophylaxis. <i>Journal of Orthopaedic Research</i> , 2019, 37, 981-990.	1.2	13
44	The Symmetry of Adverse Local Tissue Reactions in Patients with Bilateral Simultaneous and Sequential ASR Hip Replacement. <i>Journal of Arthroplasty</i> , 2015, 30, 1794-1798.	1.5	12
45	Reducing the distal profile of dual mobility liners can mitigate soft-tissue impingement and liner entrapment without affecting mechanical performance. <i>Journal of Orthopaedic Research</i> , 2016, 34, 889-897.	1.2	12
46	Surface cross-linked UHMWPE using peroxides. <i>Journal of Orthopaedic Research</i> , 2017, 35, 2551-2556.	1.2	12
47	An antioxidant stabilized, chemically cross-linked UHMWPE with superior toughness. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 1945-1952.	1.6	12
48	Efficacy of Polymer Injection for Ischemic Mitral Regurgitation. <i>JACC: Cardiovascular Interventions</i> , 2015, 8, 355-363.	1.1	10
49	Worse health-related quality of life and hip function in female patients with elevated chromium levels. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2016, 87, 485-491.	1.2	9
50	Cadaver-Specific Models for Finite-Element Analysis of Iliopsoas Impingement in Dual-Mobility Hip Implants. <i>Journal of Arthroplasty</i> , 2018, 33, 3574-3580.	1.5	9
51	Leveraging subject-specific musculoskeletal modeling to assess effect of anterior cruciate ligament retaining total knee arthroplasty during walking gait. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2020, 234, 1445-1456.	1.0	9
52	Quantifying the lubricity of mechanically tough polyvinyl alcohol hydrogels for cartilage repair. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2015, 229, 845-852.	1.0	8
53	Biological reaction to polyethylene particles in a murine calvarial model is highly influenced by age. <i>Journal of Orthopaedic Research</i> , 2016, 34, 574-580.	1.2	8
54	Improved oxidation and wear resistance of ultrahigh molecular weight polyethylene using cross-linked powder reinforcement. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 716-723.	1.6	8

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55	Chemically Cross-Linked UHMWPE With Superior Toughness. Journal of Orthopaedic Research, 2019, 37, 2182-2188.	1.2	8
56	Synergistic antibacterial effects of analgesics and antibiotics against Staphylococcus aureus. Diagnostic Microbiology and Infectious Disease, 2020, 96, 114967.	0.8	8
57	Indications for MARS-MRI in Patients Treated With Metal-on-Metal Hip Resurfacing Arthroplasty. Journal of Arthroplasty, 2018, 33, 1919-1925.	1.5	7
58	Surface cross-linked ultra high molecular weight polyethylene by emulsified diffusion of dicumyl peroxide. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 1517-1523.	1.6	7
59	Residual Byproducts of Peroxide Crosslinked Vitamin E-Blended Ultrahigh Molecular Weight Polyethylene. Journal of Arthroplasty, 2018, 33, 2666-2670.	1.5	7
60	Addressing prosthetic joint infections via gentamicin-eluting UHMWPE spacer. Bone and Joint Journal, 2020, 102-B, 151-157.	1.9	7
61	Molecular weight effect on the gel formation in poly(vinyl alcohol)-poly(ethylene glycol) mixtures. Journal of Applied Polymer Science, 2012, 125, 2890-2895.	1.3	6
62	Vitamin E can be used to hinder scissioning in radiation cross-linked UHMWPE during high-temperature melting. Journal of Applied Polymer Science, 2015, 132, .	1.3	6
63	The Role of Crosslinked Polyethylene in Reducing Aggregated Costs of Total Hip Arthroplasty in the United States. Journal of Arthroplasty, 2019, 34, 1089-1092.	1.5	6
64	Defining and predicting radiographic knee osteoarthritis progression: a systematic review of findings from the osteoarthritis initiative. Knee Surgery, Sports Traumatology, Arthroscopy, 2022, 30, 4015-4028.	2.3	6
65	Medial Calcar Erosion Is Associated With Synovial Thickness in Patients With ASR XL Total Hip Arthroplasty. Journal of Arthroplasty, 2016, 31, 2588-2592.	1.5	5
66	Evaluation of pull-off strength and seating displacement of sleeved ceramic revision heads in modular hip arthroplasty. Journal of Orthopaedic Research, 2020, 38, 1523-1528.	1.2	5
67	Current evidence from a worldwide, multicentre, follow-up study of the recalled Articular Surface Replacement Hip System. HIP International, 2021, 31, 378-387.	0.9	5
68	Homogenization in supercritical carbon dioxide enhances the diffusion of vitamin E in ultrahigh-molecular-weight polyethylene. Journal of Applied Polymer Science, 2012, 124, 518-524.	1.3	4
69	High Pressure Crystallization of Vitamin E-containing Radiation Cross-linked UHMWPE. Macromolecular Materials and Engineering, 2015, 300, 458-465.	1.7	4
70	Indications for MARS-MRI in Patients Treated With Articular Surface Replacement XL Total Hip Arthroplasty. Journal of Arthroplasty, 2018, 33, 2906-2911.	1.5	4
71	Periprosthetic acetabular radiolucency progression in mid-term follow-up of the articular surface replacement hip system. Archives of Orthopaedic and Trauma Surgery, 2018, 138, 1021-1028.	1.3	4
72	Establishing thresholds for metal ion levels in patients with bilateral Articular Surface Replacement hip arthroplasty. HIP International, 2019, 29, 475-480.	0.9	4

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73	Crosslinked Polyethylene. , 2015, , 133-182.		3
74	High temperature homogenization improves impact toughness of vitamin E-diffused, irradiated UHMWPE. Journal of Orthopaedic Research, 2017, 35, 1343-1347.	1.2	3
75	Radioprotection and cross-linking of allograft bone in the presence of vitamin E. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2354-2367.	1.6	3
76	Progression of adverse local tissue reaction in ASR metal-on-metal hip arthroplasty: a longitudinal MARS-MRI study at mid- to long-term. HIP International, 2021, 31, 369-377.	0.9	3
77	Risk factors for mid-term revision surgery in patients with articular surface replacement total hip arthroplasty. HIP International, 2018, 28, 44-49.	0.9	2
78	Inferior Radiographic and Functional Outcomes With Modular Stem in Metal-on-Metal Total Hip Arthroplasty. Journal of Arthroplasty, 2018, 33, 464-469.	1.5	2
79	Obesity is not associated with hip failure in patients with articular surface replacement of the hip. HIP International, 2020, 30, 78-86.	0.9	2
80	Patient-specific musculoskeletal models as a framework for comparing ACL function in unicompartmental versus bicruciate retaining arthroplasty. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, 235, 861-872.	1.0	2
81	Does bone penetration of cement differ by cement type and application time-point?. Medical Engineering and Physics, 2022, 101, 103768.	0.8	2
82	Do total hip arthroplasty polyethylene liners without free radicals oxidize in vivo or ex vivo?. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 1113-1119.	1.6	2
83	CORR Insights®: A Novel Technique for Assessing Antioxidant Concentration in Retrieved UHMWPE. Clinical Orthopaedics and Related Research, 2017, 475, 1366-1368.	0.7	0
84	Response to Letter to the Editor on "Indications for MARS-MRI in Patients Treated With Articular Surface Replacement XL Total Hip Arthroplasty". Journal of Arthroplasty, 2019, 34, 606-607.	1.5	0