

# David D Walker

## List of Publications by Year in descending order

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64  
papers

1,345  
citations

623734

14  
h-index

434195

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g-index

64  
all docs

64  
docs citations

64  
times ranked

327  
citing authors

#	ARTICLE	IF	CITATIONS
1	Rigid aspheric smoothing tool for mid-spatial frequency errors on aspheric or freeform optical surfaces. Journal of the European Optical Society-Rapid Publications, 2019, 15, .	1.9	2
2	Simulation and experimental study on form-preserving capability of bonnet polishing for complex freeform surfaces. Precision Engineering, 2019, 60, 54-62.	3.4	19
3	Study of footprint variations of CCP considering machine kinematics. EPJ Web of Conferences, 2019, 215, 05004.	0.3	3
4	Surface Texture Evolution of Fused Silica in a Combined Process of Atmospheric Pressure Plasma Processing and Bonnet Polishing. Coatings, 2019, 9, 676.	2.6	4
5	Title advances in optical fabrication for astronomy. Monthly Notices of the Royal Astronomical Society, 2019, 485, 2071-2082.	4.4	7
6	Combined processing chain for freeform optics based on atmospheric pressure plasma processing and bonnet polishing. Optics Express, 2019, 27, 17979.	3.4	21
7	Mid-spatial frequency removal on aluminum free-form mirror. Optics Express, 2019, 27, 24885.	3.4	17
8	Fundamental steps toward next-generation intelligent automatic process in a faster and cost-effective chain for processing optical surfaces. Optics Express, 2019, 27, 21856.	3.4	6
9	Advanced techniques for robotic polishing of aluminum mirrors. , 2018, , .		3
10	A novel hyper-crossing tool path generation algorithm for sub-aperture polishing. , 2018, , .		2
11	More steps towards process automation for optical fabrication. , 2017, , .		2
12	Research on edge-control methods in CNC polishing. Journal of the European Optical Society-Rapid Publications, 2017, 13, 24.	1.9	9
13	Insight into aspheric misfit with hard tools: mapping the island of low mid-spatial frequencies. Applied Optics, 2017, 56, 9925.	1.8	11
14	Performance of a cryogenic test facility for 4 K interferometer delay line investigations. Proceedings of SPIE, 2016, , .	0.8	4
15	Closing the metrology/process loop in CNC polishing. Proceedings of SPIE, 2016, , .	0.8	0
16	CFRP mirror technology for cryogenic space interferometry: review and progress to date. Proceedings of SPIE, 2016, , .	0.8	1
17	Optimisation of grolishing freeform surfaces with rigid and semi-rigid tools. , 2016, , .		2
18	Analysis of tool-mass-acceleration effects onto sub-aperture computer controlled polishing (CCP). , 2016, , .		1

#	ARTICLE	IF	CITATIONS
19	The LOw Cost Upper atmosphere Sounder: The "elegant breadboard" programme. , 2015, , .		0
20	The role of robotics in computer controlled polishing of large and small optics. Proceedings of SPIE, 2015, , .	0.8	3
21	Coordinate transformation of an industrial robot and its application in deterministic optical polishing. Optical Engineering, 2014, 53, 055102.	1.0	6
22	Active edge control in the precessions polishing process for manufacturing large mirror segments. Proceedings of SPIE, 2014, , .	0.8	1
23	Advanced Abrasive Processes for Manufacturing Prototype Mirror Segments for the Worldâ€™s Largest Telescope. Advanced Materials Research, 2014, 1017, 532-538.	0.3	3
24	Surface Integrity of Fluid Jet Polished Tungsten Carbide. Procedia CIRP, 2014, 13, 377-381.	1.9	33
25	Modeling and validation of polishing tool influence functions for manufacturing segments for an extremely large telescope. Applied Optics, 2013, 52, 5781.	1.8	45
26	Edge control in CNC polishing, paper 2: simulation and validation of tool influence functions on edges. Optics Express, 2013, 21, 370.	3.4	56
27	Edges in CNC polishing: from mirror-segments towards semiconductors, paper 1: edges on processing the global surface. Optics Express, 2012, 20, 19787.	3.4	63
28	Implementing a grolishing process in Zeeko IRP machines. Applied Optics, 2012, 51, 6637.	1.8	29
29	Research on fabrication of mirror segments for E-ELT. , 2012, , .		13
30	Misfit of rigid tools and interferometer subapertures on off-axis aspheric mirror segments. Optical Engineering, 2011, 50, 073401.	1.0	14
31	Alignment and arm length measurement of the swing arm profilometer using a laser tracker. , 2010, , .		2
32	Research on edge control in the process of polishing using ultra precise bonnet on optical elements. Proceedings of SPIE, 2010, , .	0.8	5
33	Measurement of influence function using swing arm profilometer and laser tracker. Optics Express, 2010, 18, 5271.	3.4	31
34	Simulation and validation of a prototype swing arm profilometer for measuring extremely large telescope mirror-segments. Optics Express, 2010, 18, 2036.	3.4	33
35	Pseudo-random tool paths for CNC sub-aperture polishing and other applications. Optics Express, 2008, 16, 18942.	3.4	135
36	Subsurface damage in precision ground ULEÂ® and ZerodurÂ® surfaces. Optics Express, 2007, 15, 12197.	3.4	33

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37	Use of the "Precessions"™ process for prepolishing and correcting 2D & 2½D form. Optics Express, 2006, 14, 11787.	3.4	79
38	Recent developments of Precessions polishing for larger components and free-form surfaces. , 2004, , .		11
39	Manufacture of segments for extremely large telescopes: a new perspective. , 2004, , .		3
40	New results from the Precessions polishing process scaled to larger sizes. , 2004, , .		24
41	Dimensional metrology of mirror segments for extremely large telescopes. , 2004, , .		0
42	Active profiling and polishing for efficient control of material removal from large precision surfaces with moderate asphericity. Mechatronics, 2003, 13, 295-312.	3.3	6
43	A concept for a superconducting tunnelling junction based spectrograph. Monthly Notices of the Royal Astronomical Society, 2003, 344, 33-44.	4.4	9
44	Novel laser datum system for nanometric profilometry for large optical surfaces. Optics Express, 2003, 11, 624.	3.4	9
45	The "Precessions" tooling for polishing and figuring flat, spherical and aspheric surfaces. Optics Express, 2003, 11, 958.	3.4	261
46	Novel hybrid stylus for nanometric profilometry for large optical surfaces. Optics Express, 2003, 11, 1793.	3.4	7
47	The Euro50 Extremely Large Telescope. , 2003, , .		26
48	Precessions process for efficient production of aspheric optics for large telescopes and their instrumentation. , 2003, , .		40
49	Dynamic measurement of displacement with phase-shifting technique. Optical Engineering, 2003, 42, 2006.	1.0	2
50	Progress on development of prototype laser reference system for stylus profilometry of large optics. , 2002, , .		1
51	Zeeko/UCL process for polishing large lenses and prisms. , 2002, , .		39
52	Novel CNC polishing process for control of form and texture on aspheric surfaces. , 2002, , .		34
53	Accidental and methodical defects of generation of precision and ultraprecision surfaces of polymer optics. , 2002, , .		0
54	<title>First aspheric form and texture results from a production machine embodying the precession process</title>. , 2001, 4451, 267.		51

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55	Measurement of two-dimensional distribution of pure axial force in active polishing. Measurement Science and Technology, 2001, 12, 1976-1982.	2.6	1
56	Novel automated process for aspheric surfaces. , 2000, , .		70
57	Adaptive secondary mirror demonstrator: design and simulation. Optical Engineering, 1999, 38, 1456.	1.0	6
58	<title>Computer-controlled polishing of moderate-sized general aspherics for instrumentation</title>. , 1998, 3355, 947.		8
59	<title>Ultrastable high-resolution spectrographs for large telescopes</title>. , 1998, , .		1
60	Rugged adaptive telescope secondaries: experience with a demonstrator mirror. , 1998, , .		2
61	<title>OGLP-400: an innovative computer-controlled polishing machine</title>. , 1996, , .		6
62	Steps toward Efficient Mosaic CCD System Design. Publications of the Astronomical Society of the Pacific, 1996, 108, 1028.	3.1	0
63	Modelling and measurement of polishing tool influence functions for edge control. Journal of the European Optical Society-Rapid Publications, 0, 6, .	1.9	23
64	Process Automation in Computer Controlled Polishing. Advanced Materials Research, 0, 1136, 684-689.	0.3	7