

# Margaret M Stack

## List of Publications by Year in descending order

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135  
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4,098  
citations

94433

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144013

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139  
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139  
docs citations

139  
times ranked

2056  
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of triboparticulates in dry sliding wear. Tribology International, 1998, 31, 245-256.	5.9	227
2	Modelling the tribo-corrosion interaction in aqueous sliding conditions. Tribology International, 2002, 35, 669-679.	5.9	171
3	On erosion issues associated with the leading edge of wind turbine blades. Journal Physics D: Applied Physics, 2013, 46, 383001.	2.8	158
4	A mathematical model for sliding wear of metals at elevated temperatures. Wear, 1995, 181-183, 20-31.	3.1	118
5	Some frictional features associated with the sliding wear of the nickel-base alloy N80A at temperatures to 250 Å°C. Wear, 1994, 176, 185-194.	3.1	113
6	A generic model for dry sliding wear of metals at elevated temperatures. Wear, 2004, 256, 973-985.	3.1	112
7	The corrosion behaviour of macroparticle defects in arc bond-sputtered CrN/NbN superlattice coatings. Surface and Coatings Technology, 2000, 126, 279-287.	4.8	107
8	Mapping erosion-corrosion of carbon steel in oil exploration conditions: Some new approaches to characterizing mechanisms and synergies. Tribology International, 2010, 43, 1268-1277.	5.9	100
9	Erosionâ€“corrosion mapping of Fe in aqueous slurries: some views on a new rationale for defining the erosionâ€“corrosion interaction. Wear, 2004, 256, 565-576.	3.1	83
10	Characterization of Synergistic Effects Between Erosion and Corrosion in an Aqueous Environment Using Electrochemical Techniques. Corrosion, 1996, 52, 934-946.	1.1	79
11	Wear maps for TiC composite based coatings deposited on 303 stainless steel. Tribology International, 2014, 74, 93-102.	5.9	78
12	Modelling sliding wear: From dry to wet environments. Wear, 2006, 261, 954-965.	3.1	68
13	Micro-abrasionâ€“corrosion of a Coâ€“Cr/UHMWPE couple in Ringer's solution: An approach to construction of mechanism and synergism maps for application to bio-implants. Wear, 2010, 269, 376-382.	3.1	68
14	Some comments on mapping the combined effects of slurry concentration, impact velocity and electrochemical potential on the erosionâ€“corrosion of WC/Coâ€“Cr coatings. Wear, 2008, 264, 826-837.	3.1	64
15	Mapping erosionâ€“corrosion of WC/Coâ€“Cr based composite coatings: Particle velocity and applied potential effects. Surface and Coatings Technology, 2006, 201, 1335-1347.	4.8	62
16	Modelling particulate erosionâ€“corrosion in aqueous slurries: some views on the construction of erosionâ€“corrosion maps for a range of pure metals. Wear, 2004, 256, 986-1004.	3.1	61
17	Identification of transitions in erosion-corrosion regimes in aqueous environments. Wear, 1995, 186-187, 523-532.	3.1	57
18	Mapping tribo-corrosion processes in dry and in aqueous conditions: some new directions for the new millennium. Tribology International, 2002, 35, 681-689.	5.9	57

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19	On the construction of micro-abrasion maps for a steel/polymer couple in corrosive environments. <i>Tribology International</i> , 2005, 38, 848-856.	5.9	57
20	Mapping wear mechanisms of TiC/Ti composite coatings. <i>Wear</i> , 2015, 328-329, 498-508.	3.1	56
21	A methodology for the construction of the erosion-corrosion map in aqueous environments. <i>Wear</i> , 1997, 203-204, 474-488.	3.1	55
22	Tribocorrosion behaviour of TiC O thin films in bio-fluids. <i>Electrochimica Acta</i> , 2010, 56, 929-937.	5.2	55
23	Micro-abrasion transitions of metallic materials. <i>Wear</i> , 2003, 255, 14-22.	3.1	54
24	The influence of low concentrations of chromium and yttrium on the oxidation behaviour, residual stress and corrosion performance of TiAlN hard coatings on steel substrates. <i>Vacuum</i> , 1999, 55, 109-114.	3.5	53
25	Bridging the gap between tribology and corrosion: from wear maps to Pourbaix diagrams. <i>International Materials Reviews</i> , 2005, 50, 1-17.	19.3	53
26	Corrosion, Tribology, and Tribocorrosion Research in Biomedical Implants: Progressive Trend in the Published Literature. <i>Journal of Bio- and Tribo-Corrosion</i> , 2017, 3, 1.	2.6	53
27	Mapping sliding wear of steels in aqueous conditions. <i>Wear</i> , 2003, 255, 456-465.	3.1	49
28	Particle concentration and size effects on the erosion-corrosion of pure metals in aqueous slurries. <i>Tribology International</i> , 2012, 53, 35-44.	5.9	47
29	Relationship between the effects of velocity and alloy corrosion resistance in erosion-corrosion environments at elevated temperatures. <i>Wear</i> , 1995, 180, 91-99.	3.1	45
30	Mapping erosionâ€“corrosion of carbon steel in oilâ€“water solutions: Effects of velocity and applied potential. <i>Wear</i> , 2012, 274-275, 401-413.	3.1	45
31	Electrochemical studies of anodic dissolution of mild steel in a carbonate-bicarbonate buffer under erosion-corrosion conditions. <i>Corrosion Science</i> , 1996, 38, 1071-1084.	6.6	43
32	Slurry erosion of metallics, polymers, and ceramics: particle size effects. <i>Materials Science and Technology</i> , 1999, 15, 337-344.	1.6	41
33	Erosion-corrosion regimes: number, nomenclature and justification?. <i>Tribology International</i> , 1995, 28, 445-451.	5.9	40
34	Review of mechanisms of erosion-corrosion of alloys at elevated temperatures. <i>Wear</i> , 1993, 162-164, 706-712.	3.1	38
35	The effect of partial pressure of oxygen on the tribological behaviour of a nickel-based alloy, N80A, at elevated temperatures. <i>Wear</i> , 1997, 203-204, 615-625.	3.1	38
36	Particulate erosionâ€“corrosion of Al in aqueous conditions: some perspectives on pH effects on the erosionâ€“corrosion map. <i>Tribology International</i> , 2002, 35, 651-660.	5.9	38

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37	A new methodology for modelling erosion–corrosion regimes on real surfaces: Gliding down the galvanic series for a range of metal-corrosion systems. <i>Wear</i> , 2010, 268, 533-542.	3.1	38
38	Wear mapping of CoCrMo alloy in simulated bio-tribocorrosion conditions of a hip prosthesis bearing in calf serum solution. <i>Materials Science and Engineering C</i> , 2015, 49, 452-462.	7.3	38
39	Some thoughts on modelling the effects of oxygen and particle concentration on the erosion–corrosion of steels in aqueous slurries. <i>Wear</i> , 2003, 255, 225-236.	3.1	36
40	Modelling impact angle effects on erosion–corrosion of pure metals: Construction of materials performance maps. <i>Wear</i> , 2005, 259, 243-255.	3.1	36
41	Velocity effects on erosion–corrosion of CrN/NbN –superlattice–PVD coatings. <i>Surface and Coatings Technology</i> , 2006, 201, 361-370.	4.8	36
42	On the construction of erosion–corrosion maps for WC/Co–Cr-based coatings in aqueous conditions. <i>Wear</i> , 2006, 261, 1181-1190.	3.1	36
43	CrN/NbN coatings deposited by HIPIMS: A preliminary study of erosion–corrosion performance. <i>Surface and Coatings Technology</i> , 2010, 204, 1158-1162.	4.8	33
44	Bio-tribocorrosion mechanisms in orthopaedic devices: Mapping the micro-abrasion–corrosion behaviour of a simulated CoCrMo hip replacement in calf serum solution. <i>Wear</i> , 2014, 316, 58-69.	3.1	33
45	Impact angle effects on the erosion–corrosion of superlattice CrN/NbN PVD coatings. <i>Surface and Coatings Technology</i> , 2004, 188-189, 556-565.	4.8	32
46	Phase transformation behavior of 3mol% yttria partially-stabilized ZrO <sub>2</sub> (3Y–PSZ) precursor powder by an isothermal method. <i>Ceramics International</i> , 2014, 40, 3243-3251.	4.8	31
47	Erosion–corrosion of preoxidised Incoloy 800H in fluidised bed environments: effects of temperature, velocity, and exposure time. <i>Materials Science and Technology</i> , 1991, 7, 1128-1137.	1.6	30
48	An approach to modelling erosion-corrosion of alloys using erosion-corrosion maps. <i>Corrosion Science</i> , 1993, 35, 1027-1034.	6.6	30
49	A study of the erosion–corrosion of PVD CrN/NbN superlattice coatings in aqueous slurries. <i>Wear</i> , 2005, 259, 256-262.	3.1	29
50	Erosion–corrosion of chromium steel in a rotating cylinder electrode system: some comments on particle size effects. <i>Wear</i> , 2004, 256, 557-564.	3.1	28
51	Some views on the construction of bio-tribo-corrosion maps for Titanium alloys in Hank's solution: Particle concentration and applied loads effects. <i>Tribology International</i> , 2011, 44, 1827-1837.	5.9	28
52	Effects of particle velocity and applied potential on erosion of mild steel in carbonate/bicarbonate slurry. <i>Materials Science and Technology</i> , 1996, 12, 261-268.	1.6	27
53	Some thoughts on neural network modelling of microabrasion–corrosion processes. <i>Tribology International</i> , 2008, 41, 672-681.	5.9	27
54	A CFD model of particle concentration effects on erosion–corrosion of Fe in aqueous conditions. <i>Wear</i> , 2011, 273, 38-42.	3.1	27

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55	Mapping hail meteorological observations for prediction of erosion in wind turbines. <i>Wind Energy</i> , 2016, 19, 777-784.	4.2	27
56	Solid particle erosion of metal matrix composites at elevated temperatures: construction of erosion mechanism and process control maps. <i>Wear</i> , 1997, 203-204, 489-497.	3.1	26
57	Some thoughts on the effect of elastic rebounds on the boundaries of the aqueous erosion-corrosion map. <i>Wear</i> , 1998, 214, 175-185.	3.1	26
58	Micro-abrasionâ€“corrosion interactions of Niâ€“Cr/WC based coatings: Approaches to construction of tribo-corrosion maps for the abrasionâ€“corrosion synergism. <i>Electrochimica Acta</i> , 2011, 56, 8249-8259.	5.2	26
59	Modelling Rain Drop Impact of Offshore Wind Turbine Blades. , 2012, , .		26
60	Interpretation of wastage mechanisms of materials exposed to elevated temperature erosion-corrosion using erosionâ€“corrosion maps and computer graphics. <i>Wear</i> , 1995, 186-187, 273-283.	3.1	24
61	Wear associated with growth defects in combined cathodic arc/unbalanced magnetron sputtered CrN/NbN superlattice coatings during erosion in alkaline slurry. <i>Surface and Coatings Technology</i> , 2000, 135, 82-90.	4.8	24
62	Mapping the micro-abrasion resistance of WC/Co based coatings in aqueous conditions. <i>Surface and Coatings Technology</i> , 2004, 183, 337-346.	4.8	24
63	The effect of substrate hardness on the erosion-corrosion resistance of materials in low-velocity conditions. <i>Corrosion Science</i> , 1993, 35, 1045-1051.	6.6	23
64	Some recent advances in the development of theoretical approaches for the construction of erosionâ€“corrosion maps in aqueous conditions. <i>Wear</i> , 1999, 233-235, 535-541.	3.1	23
65	Construction of erosionâ€“corrosion maps for erosion in aqueous slurries. <i>Materials Science and Technology</i> , 1996, 12, 662-672.	1.6	22
66	Impact angle effects on the transition boundaries of the aqueous erosionâ€“corrosion map. <i>Wear</i> , 1999, 225-229, 190-198.	3.1	22
67	Mapping erosion of Niâ€“Cr/WC-based composites at elevated temperatures: some recent advances. <i>Wear</i> , 2001, 251, 1433-1443.	3.1	22
68	Title is missing!. <i>Journal of Materials Science</i> , 2000, 35, 5263-5273.	3.7	21
69	Tribo-corrosion of steel in artificial saliva. <i>Tribology International</i> , 2014, 75, 80-86.	5.9	20
70	The effect of pre-oxidation of chromia and alumina forming alloys on erosion in laboratory simulated fluidized-bed conditions. <i>Corrosion Science</i> , 1992, 33, 965-983.	6.6	19
71	Some views on the erosionâ€“corrosion response of bulk chromium carbide based cermets. <i>Journal Physics D: Applied Physics</i> , 2006, 39, 3165-3174.	2.8	19
72	The Effect of Dissolved Oxygen in Slurry on Erosionâ€“Corrosion of En30B Steel. <i>Journal of Bio- and Tribo-Corrosion</i> , 2017, 3, 1.	2.6	19

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73	Micro-abrasion resistance of thermochemically treated steels in aqueous solutions: Mechanisms, maps, materials selection. <i>Tribology International</i> , 2008, 41, 141-149.	5.9	16
74	Growth kinetics of tetragonal and monoclinic ZrO <sub>2</sub> crystallites in 3mol% yttria partially stabilized ZrO <sub>2</sub> (3Y-PSZ) precursor powder. <i>Journal of Alloys and Compounds</i> , 2014, 592, 288-295.	5.5	16
75	Characterization of wear scar surfaces using combined three-dimensional topographic analysis and contact resistance measurements. <i>Tribology International</i> , 1997, 30, 517-526.	5.9	15
76	Particle size effects on the elevated temperature erosion behaviour of Ni-Cr/WC MMC-based coatings. <i>Surface and Coatings Technology</i> , 1999, 113, 5-12.	4.8	15
77	Tribo-corrosion mechanisms of stainless steel in soft drinks. <i>Wear</i> , 2010, 270, 104-114.	3.1	15
78	Mapping the role of Cr content in dry sliding of steels: Comparison between maps for material and counterface. <i>Tribology International</i> , 2014, 80, 49-57.	5.9	15
79	Synergism between effects of velocity, temperature, and alloy corrosion resistance in laboratory simulated fluidised bed environments. <i>Materials Science and Technology</i> , 1995, 11, 1180-1186.	1.6	14
80	Simplifying the erosion-corrosion mechanism map for erosion of thin coatings in aqueous slurries. <i>Wear</i> , 1999, 233-235, 542-551.	3.1	14
81	Tribo-oxidation maps for Ti against steel. <i>Tribology International</i> , 2015, 91, 258-266.	5.9	14
82	Corrosion of PVD TiN coatings under simultaneous erosion in sodium carbonate/bicarbonate buffered slurries. <i>Surface and Coatings Technology</i> , 1998, 105, 141-146.	4.8	13
83	A note on threshold velocity criteria for modelling the solid particle erosion of WC/Co MMCs. <i>Wear</i> , 2011, 270, 439-445.	3.1	13
84	Micro-abrasion of Y-TZP in tea. <i>Wear</i> , 2013, 297, 713-721.	3.1	13
85	Erosion of PVD TiN coatings under simultaneous corrosion in sodium carbonate/bicarbonate buffer slurries containing alumina particles. <i>Surface and Coatings Technology</i> , 1998, 106, 1-7.	4.8	12
86	The erosion-corrosion of alloys under oxidizing-sulphidizing conditions at high temperature. <i>Wear</i> , 1995, 186-187, 291-298.	3.1	11
87	Elevated temperature erosion of range of composite layers of Ni-Cr based functionally graded material. <i>Materials Science and Technology</i> , 1996, 12, 171-177.	1.6	11
88	Some remarks on particle size effects on the abrasion of a range of Fe based alloys. <i>Tribology International</i> , 2010, 43, 1307-1317.	5.9	11
89	Some perspectives on modelling the effect of temperature on the erosion-corrosion of Fe in aqueous conditions. <i>Tribology International</i> , 2010, 43, 2279-2297.	5.9	11
90	Some Thoughts on Mapping Tribological Issues of Wind Turbine Blades Due to Effects of Onshore and Offshore Raindrop Erosion. <i>Journal of Bio- and Tribo-Corrosion</i> , 2018, 4, 1.	2.6	11

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91	Raindrop Erosion of Composite Materials: Some Views on the Effect of Bending Stress on Erosion Mechanisms. <i>Journal of Bio- and Tribo-Corrosion</i> , 2019, 5, 1.	2.6	11
92	On a multiphysics approach to modelling the erosion-enhanced corrosion of low-alloy carbon steel in chloride containing environments. <i>Corrosion Science</i> , 2020, 176, 109045.	6.6	11
93	Title is missing!. <i>Tribology Letters</i> , 1999, 6, 23-36.	2.6	10
94	On the construction of wear maps for Y-TZP dental ceramics in aqueous environments: pH, exposure time and impact angle effects. <i>Tribology International</i> , 2010, 43, 2258-2267.	5.9	10
95	Mapping Synergy of Erosion Mechanisms of Tidal Turbine Composite Materials in Sea Water Conditions. <i>Journal of Bio- and Tribo-Corrosion</i> , 2016, 2, 1.	2.6	10
96	Repeated impact of simulated hail ice on glass fibre composite materials. <i>Wear</i> , 2019, 432-433, 102926.	3.1	10
97	Mapping Tribo-Corrosion Behaviour of Ti-6Al-4V Eli in Laboratory Simulated Hip Joint Environments. <i>Lubricants</i> , 2020, 8, 69.	2.9	10
98	A note on the construction of materials performance maps for resistance to erosion in aqueous slurries. <i>Wear</i> , 1998, 215, 67-76.	3.1	9
99	In situ solid state electrochemical impedance spectroscopy of NiO scales. <i>Solid State Ionics</i> , 1999, 126, 363-372.	2.7	9
100	Impact Angle Effects on Erosion Maps of GFRP: Applications to Tidal Turbines. <i>Journal of Bio- and Tribo-Corrosion</i> , 2016, 2, 1.	2.6	9
101	High temperature erosion of pre-oxidized and as received alloys: Effects of impact angle, temperature and hot hardness. <i>Materials at High Temperatures</i> , 1991, 9, 153-159.	1.0	8
102	Micro-abrasion-corrosion Maps of 316L Stainless Steel in Artificial Saliva. <i>Journal of Bio- and Tribo-Corrosion</i> , 2015, 1, 1.	2.6	8
103	Some issues relating to the construction of materials selection maps for resistance to elevated temperature erosion. <i>Tribology International</i> , 1997, 30, 435-444.	5.9	7
104	Some thoughts on the construction of erosion-corrosion maps for PVD coated steels in aqueous environments. <i>Surface and Coatings Technology</i> , 1999, 113, 52-62.	4.8	7
105	Modelling particulate erosion-corrosion regime transitions for Al/Al <sub>2</sub> O <sub>3</sub> and Cu/Al <sub>2</sub> O <sub>3</sub> MMCs in aqueous conditions. <i>Tribology International</i> , 2005, 38, 995-1006.	5.9	7
106	A note on a design protocol for deoxygenation of water. <i>Electrochemistry Communications</i> , 2019, 103, 12-16.	4.7	7
107	Macroparticle induced corrosion for arc bond sputtering CrN/NbN superlattice coatings. <i>Journal of Materials Science Letters</i> , 2001, 20, 1995-1997.	0.5	6
108	Some Views on the Mapping of Erosion of Coated Composites In Tidal Turbine Simulated Conditions. <i>Tribology Transactions</i> , 2019, 62, 512-523.	2.0	6

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109	Mapping the Micro-Abrasion Mechanisms of CoCrMo: Some Thoughts on Varying Ceramic Counterface Diameter on Transition Boundaries In Vitro. <i>Lubricants</i> , 2020, 8, 71.	2.9	6
110	A Study of Raindrop Impacts on a Wind Turbine Material: Velocity and Impact Angle Effects on Erosion MAPS at Various Exposure Times. <i>Lubricants</i> , 2021, 9, 60.	2.9	6
111	Computer simulation of erosion-corrosion interactions at elevated temperatures. <i>Wear</i> , 1995, 181-183, 516-523.	3.1	5
112	Looking beyond the millennium: critical issues in the evaluation of materials performance for resistance to erosive wear in corrosive conditions. <i>Wear</i> , 1999, 233-235, 484-496.	3.1	5
113	Title is missing!. <i>Journal of Applied Electrochemistry</i> , 2001, 31, 1373-1379.	2.9	5
114	Transitions in microabrasion mechanisms for WC-Co (HVOF) coated steel. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2005, 219, 49-57.	1.8	5
115	Methodology Development for Investigation of Slurry Abrasion Corrosion by Integrating an Electrochemical Cell to a Miller Tester. <i>Journal of Bio- and Tribo-Corrosion</i> , 2015, 1, 1.	2.6	5
116	Future Needs and Challenges in Tribo-Corrosion Research and Testing. , 2013, , 214-226.		5
117	A comparison of the tribological behaviour of Y-TZP in tea and coffee under micro-abrasion conditions. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 404008.	2.8	4
118	Mapping of Meteorological Observations over the Island of Ireland to Enhance the Understanding and Prediction of Rain Erosion in Wind Turbine Blades. <i>Energies</i> , 2021, 14, 4555.	3.1	4
119	Some comments on micro-abrasion interactions of pure metals in bio-oils. <i>Journal of Synthetic Lubrication: Research, Development and Application of Synthetic Lubricants and Functional Fluids</i> , 2004, 21, 105-118.	0.7	3
120	Erosion Mapping of Through-Thickness Toughened Powder Epoxy Gradient Glass-Fiber-Reinforced Polymer (GFRP) Plates for Tidal Turbine Blades. <i>Lubricants</i> , 2021, 9, 22.	2.9	3
121	An Approach to Mapping the Erosion&quotCorrosion of Stainless Steel: Applications to Tidal Energy Systems. , 2013, , 19-46.		3
122	Optimizing the performance of materials in FBC conditions using erosion-corrosion wastage and materials performance maps. <i>Materials at High Temperatures</i> , 1997, 14, 313-324.	1.0	2
123	Corrosion behaviour and characterisation of iron in hot flowing Bayer liquors. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2000, 51, 705-711.	1.5	2
124	Title is missing!. <i>Journal of Materials Science Letters</i> , 2001, 20, 547-550.	0.5	2
125	Mapping Raindrop Erosion of GFRP Composite Wind Turbine Blade Materials: Perspectives on Degradation Effects in Offshore and Acid Rain Environmental Conditions. <i>Journal of Tribology</i> , 2020, 142, .	1.9	2
126	Computer simulation of the effect of pre-oxidation in erosion-corrosion environments. <i>Journal Physics D: Applied Physics</i> , 1992, 25, A170-A176.	2.8	1



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127	On the Effect of Pre-formed Scales in Mitigating Corrosion of Steels in CO2 Environments. Journal of Bio- and Tribo-Corrosion, 2020, 6, 1.	2.6	1
128	Erosion-corrosion Mapping in Dry and in Aqueous Environments: Review of Recent Developments. Zairyo To Kankyo/ Corrosion Engineering, 1996, 45, 551-559.	0.2	0
129	There's something in the way you move. Physics World, 2004, 17, 24-25.	0.0	0
130	Title is missing!. Tribology International, 2005, 38, 785.	5.9	0
131	A celebration of 25 years of the Tribology Group: from tribo-physics to tribo-chemistry. Journal Physics D: Applied Physics, 2007, 40, .	2.8	0
132	Tribo-Corrosion 2006â€™A passage to India to celebrate the 1st International Conference on Tribo-Corrosion. Tribology International, 2008, 41, 571-572.	5.9	0
133	2nd International Conference on TriboCorrosion: East meets West. Tribology International, 2010, 43, 1201-1202.	5.9	0
134	3rd International Conference on Tribocorrosion â€™ Atlanta 2012. Tribology International, 2013, 68, iv.	5.9	0
135	Special cluster issue on tribocorrosion of dental materials. Journal Physics D: Applied Physics, 2013, 46, 400301.	2.8	0