

# David G Bucknall

## List of Publications by Year in descending order

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127  
papers

4,123  
citations

117453

34  
h-index

128067

60  
g-index

132  
all docs

132  
docs citations

132  
times ranked

5195  
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent advances in the study of chemical surfaces and interfaces by specular neutron reflection. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1997, 93, 3899-3917.	1.7	319
2	Detonation Nanodiamond and Onion-Like Carbon-Embedded Polyaniline for Supercapacitors. <i>Advanced Functional Materials</i> , 2010, 20, 3979-3986.	7.8	245
3	Amplified Optical Nonlinearity in a Self-Assembled Double-Strand Conjugated Porphyrin Polymer Ladder. <i>Journal of the American Chemical Society</i> , 2002, 124, 9712-9713.	6.6	217
4	Evidence for Capillary Waves at Immiscible Polymer/Polymer Interfaces. <i>Physical Review Letters</i> , 1997, 78, 3693-3696.	2.9	195
5	Chain End Effects and Dewetting in Thin Polymer Films. <i>Macromolecules</i> , 1996, 29, 4305-4313.	2.2	160
6	Interfacial Instability Driven by Dispersive Forces: The Early Stages of Spinodal Dewetting of a Thin Polymer Film on a Polymer Substrate. <i>Physical Review Letters</i> , 1998, 81, 5173-5176.	2.9	151
7	CHEMISTRY: Polymers Get Organized. <i>Science</i> , 2003, 302, 1904-1905.	6.0	108
8	Jetting Micron-Scale Droplets onto Chemically Heterogeneous Surfaces. <i>Langmuir</i> , 2003, 19, 9818-9822.	1.6	98
9	Influence of interfaces on thin polymer film behaviour. <i>Progress in Materials Science</i> , 2004, 49, 713-786.	16.0	94
10	Two methods for amplifying the optical nonlinearity of a conjugated porphyrin polymer: transmetallation and self-assembly. <i>Journal of Materials Chemistry</i> , 2003, 13, 2796-2808.	6.7	92
11	Annealing effects on thickness of polystyrene thin films as studied by neutron reflectivity. <i>Polymer</i> , 2003, 44, 3769-3773.	1.8	89
12	Temporally-resolved inkjet drop impaction on surfaces. <i>AIChE Journal</i> , 2007, 53, 2606-2617.	1.8	85
13	Nanoporous layered silicate AMH-3/cellulose acetate nanocomposite membranes for gas separations. <i>Journal of Membrane Science</i> , 2013, 441, 129-136.	4.1	85
14	Nanocomposites of Carbon Nanotube Fibers Prepared by Polymer Crystallization. <i>ACS Applied Materials &amp; Interfaces</i> , 2010, 2, 1642-1647.	4.0	82
15	Tuning Molecular Relaxation for Vertical Orientation in Cylindrical Block Copolymer Films via Sharp Dynamic Zone Annealing. <i>Macromolecules</i> , 2012, 45, 7107-7117.	2.2	78
16	Plastics as a materials system in a circular economy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190268.	1.6	76
17	Molecular dynamics simulation study of P (VP-co-HEMA) hydrogels: Effect of water content on equilibrium structures and mechanical properties. <i>Biomaterials</i> , 2009, 30, 6130-6141.	5.7	73
18	Spontaneous Formation of Ordered Lateral Patterns in Polymer Thin-Film Structures. <i>Advanced Functional Materials</i> , 2004, 14, 1081-1088.	7.8	69

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19	Stable Solution-Processed Molecular Channel Organic Field-Effect Transistors. <i>Advanced Materials</i> , 2012, 24, 4445-4450.	11.1	67
20	Structure of Polymer Brushes under Shear Flow in a Good Solvent. <i>Macromolecules</i> , 2000, 33, 1120-1122.	2.2	57
21	The crystal structure of poly(ethylene furanoate). <i>Polymer</i> , 2016, 102, 308-314.	1.8	55
22	Thickness dependence of the total magnetic moment per atom in the Cu/Ni/Cu/Si(001) system. <i>Physical Review B</i> , 1997, 55, 11422-11431.	1.1	54
23	Fluorescence quenching of a poly(para-phenylene ethynyls) by C60 fullerenes. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2012, 249, 41-46.	2.0	53
24	Solid Inclusion Complexes of $\beta$ -Cyclodextrin and Perdeuterated Poly(oxyethylene). <i>Macromolecules</i> , 2005, 38, 2261-2270.	2.2	45
25	Linear and non-linear optical properties of the different Langmuir-Blodgett phases of $C_nH_{2n+1}Q_3CNQ$ . <i>Journal of Materials Chemistry</i> , 1995, 5, 975-980.	6.7	44
26	Surface-Induced Polymer Crystallization in High Volume Fraction Aligned Carbon Nanotube-Polymer Composites. <i>Macromolecular Chemistry and Physics</i> , 2010, 211, 1003-1011.	1.1	41
27	A Review of Sensing Technologies for Non-Destructive Evaluation of Structural Composite Materials. <i>Journal of Composites Science</i> , 2021, 5, 319.	1.4	40
28	Equilibrium concentration profiles of physically end tethered polystyrene molecules at the air-polymer interface. <i>Polymer</i> , 1997, 38, 87-98.	1.8	38
29	Structure-Property Relationships Directing Transport and Charge Separation in Isoindigo Polymers. <i>Macromolecules</i> , 2016, 49, 4008-4022.	2.2	38
30	Real-Time Measurement of Polymer Diffusion Coefficients Using Neutron Reflection. <i>Macromolecules</i> , 1999, 32, 5453-5456.	2.2	37
31	Uniform Nanoscopic Polystyrene Patterns Produced from a Microscopic Mold. <i>Nano Letters</i> , 2004, 4, 1513-1519.	4.5	37
32	The Kinetics of Penetration of Grafted Polymers into a Network. <i>Macromolecules</i> , 1999, 32, 5106-5114.	2.2	36
33	Control of drop positioning using chemical patterning. <i>Applied Physics Letters</i> , 2005, 87, 024103.	1.5	34
34	Effect of Monomeric Sequence on Mechanical Properties of P(VP-co-HEMA) Hydrogels at Low Hydration. <i>Journal of Physical Chemistry B</i> , 2009, 113, 6604-6612.	1.2	34
35	Synthesis and properties of a novel anisotropic self-inflating hydrogel tissue expander. <i>Acta Biomaterialia</i> , 2011, 7, 1126-1132.	4.1	34
36	Drop-on-demand drop formation of colloidal suspensions. <i>International Journal of Multiphase Flow</i> , 2012, 38, 17-26.	1.6	34

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37	Swelling behavior and network structure of hydrogels synthesized using controlled UV-initiated free radical polymerization. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 1450-1462.	2.4	31
38	Droplet Spreading on Microstriped Surfaces. <i>Journal of Physical Chemistry B</i> , 2005, 109, 8973-8977.	1.2	30
39	Thermo-cross-linkable fullerene for long-term stability of photovoltaic devices. <i>Journal of Materials Chemistry A</i> , 2015, 3, 21856-21863.	5.2	30
40	Hisactophilin-mediated binding of actin to lipid lamellae: a neutron reflectivity study of protein membrane coupling. <i>Biophysical Journal</i> , 1996, 71, 811-823.	0.2	28
41	A neutron reflectometry study of polystyrene network interfaces. <i>European Physical Journal B</i> , 1998, 3, 83-96.	0.6	27
42	High-shear-rate capillary viscometer for inkjet inks. <i>Review of Scientific Instruments</i> , 2010, 81, 065106.	0.6	26
43	Morphology Control in Films of Isoindigo Polymers by Side-Chain and Molecular Weight Effects. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 13357-13368.	4.0	26
44	Extraction of Process-Structure Evolution Linkages from X-ray Scattering Measurements Using Dimensionality Reduction and Time Series Analysis. <i>Integrating Materials and Manufacturing Innovation</i> , 2017, 6, 147-159.	1.2	25
45	Synchrotron X-ray scattering study on amorphous poly(ethylene terephthalate) under uniaxial deformation. <i>Polymer</i> , 2018, 139, 60-67.	1.8	25
46	The compatibilizing effect of diblock copolymer on the morphology of immiscible polymer blends. <i>Polymer</i> , 1992, 33, 4419-4422.	1.8	24
47	Role of Conformation in $\pi$ - $\pi$ Interactions and Polymer/Fullerene Miscibility. <i>Journal of Physical Chemistry B</i> , 2011, 115, 8989-8995.	1.2	24
48	Modulation of Cytochrome C Coupling to Anionic Lipid Monolayers by a Change of the Phase State: A Combined Neutron and Infrared Reflection Study. <i>Biophysical Journal</i> , 2000, 79, 1428-1437.	0.2	22
49	Interface width of low-molecular-weight immiscible polymers. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 10269-10277.	0.7	22
50	Structure-processing-property correlations in solution-processed, small-molecule, organic solar cells. <i>Journal of Materials Chemistry C</i> , 2013, 1, 5250.	2.7	22
51	Investigation of the melt interface between polyethylene and polystyrene using neutron reflectivity. <i>Polymer</i> , 1997, 38, 985-989.	1.8	21
52	C60 fullerene inclusions in low-molecular-weight polystyrene-poly(dimethylsiloxane) diblock copolymers. <i>Polymer</i> , 2009, 50, 4199-4204.	1.8	20
53	Development of a Novel Anisotropic Self-Inflating Tissue Expander. <i>Plastic and Reconstructive Surgery</i> , 2012, 129, 79-88.	0.7	19
54	Large area ordered lateral patterns in confined polymer thin films. <i>European Polymer Journal</i> , 2004, 40, 981-986.	2.6	18

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55	Phase behavior of blends of PCBM with amorphous polymers with different aromaticity. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016, 54, 994-1001.	2.4	18
56	Early stages of oligomer-polymer diffusion. <i>Chemical Engineering Science</i> , 2001, 56, 5473-5483.	1.9	17
57	Neutron Reflection from 2,4-Bis(4-(N-methyl-N-octylamino)phenyl)squaraine at the Air-Water Interface and the Linear and Nonlinear Optical Properties of Its Langmuir-Blodgett and Spun-Coated Films. <i>Langmuir</i> , 1997, 13, 1629-1633.	1.6	16
58	Chain confinement effects on interdiffusion in polymer multilayers. <i>Physical Review E</i> , 1999, 59, 885-888.	0.8	16
59	Form Transcrystals of Poly(propylene) Induced by Individual Carbon Nanotubes. <i>Macromolecular Chemistry and Physics</i> , 2010, 211, 1348-1354.	1.1	16
60	Inclined nanoimprinting lithography for 3D nanopatterning. <i>Nanotechnology</i> , 2011, 22, 225302.	1.3	16
61	Neutron reflectivity of polymer interfaces. <i>Journal of Physics and Chemistry of Solids</i> , 1999, 60, 1273-1277.	1.9	15
62	Interfacial structures of block and graft copolymers with lamellar microphase-separated structures. <i>Physica B: Condensed Matter</i> , 2000, 283, 12-16.	1.3	15
63	Silicon Oxide Nanowires: Facile and Controlled Large Area Fabrication of Vertically Oriented Silicon Oxide Nanowires for Photoluminescence and Sensor Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 8932-8938.	4.0	15
64	Flexible Low-Density Polyethylene-BaTiO <sub>3</sub> Nanoparticle Composites for Monitoring Leakage Current in High-Tension Equipment. <i>ACS Applied Nano Materials</i> , 2021, 4, 2413-2422.	2.4	15
65	Segregation behaviour of deuterated poly(styrene-block-methyl methacrylate) diblock copolymer in the presence of poly(methyl methacrylate) homopolymer. <i>Polymer</i> , 1993, 34, 451-458.	1.8	14
66	Roughness correlation and interdiffusion in thin films of polymer chains. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999, 37, 2862-2874.	2.4	14
67	Conformational Changes in SP-B as a Function of Surface Pressure. <i>Biophysical Journal</i> , 2003, 85, 2624-2632.	0.2	14
68	Nucleated dewetting of thin polymer films. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 74, s383-s385.	1.1	13
69	Synergetic enhancement of organic solar cell thermal stability by wire bar coating and light processing. <i>Journal of Materials Chemistry C</i> , 2015, 3, 9551-9558.	2.7	13
70	Simultaneous WAXS/SAXS study on semi-crystalline Poly(ethylene furanoate) under uniaxial stretching. <i>Polymer</i> , 2018, 143, 228-236.	1.8	13
71	Thermally driven collapse of a polymer brush in a polymer matrix. <i>Physical Review E</i> , 1999, 59, 4434-4440.	0.8	12
72	Surface segregation from polystyrene networks. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 5129-5142.	0.7	12

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73	Neutron reflectivity studies of the structure of polymer/polymer and polymer/substrate interfaces at the nanometer level. <i>Journal of Materials Chemistry</i> , 2000, 10, 127-132.	6.7	12
74	Interface dependent magnetic moments in Cu/Co,Ni/Cu/Si(001) epitaxial structures. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 313, 89-97.	1.0	12
75	Effect of monomeric sequence on transport properties of d-glucose and ascorbic acid in poly(VP-co-HEMA) hydrogels with various water contents: molecular dynamics simulation approach. <i>Theoretical Chemistry Accounts</i> , 2012, 131, 1.	0.5	12
76	Solventless processing of conjugated polymers—A review. <i>Synthetic Metals</i> , 2014, 197, 23-33.	2.1	12
77	Real-time neutron reflectivity study of the early stages of diffusion into and dissolution of glassy polymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 3267-3281.	2.4	11
78	Cleft palate repair with the use of osmotic expanders: a response. <i>Journal of Plastic, Reconstructive and Aesthetic Surgery</i> , 2008, 61, 220-221.	0.5	11
79	Physical mixtures of small-molecule and polymeric organic semiconductors: comparing thermodynamic behavior and thin-film structure. <i>Journal of Materials Chemistry C</i> , 2013, 1, 778-785.	2.7	11
80	Phosphorescent light-emitting diodes using triscarbazole/bis(oxadiazole) hosts: comparison of homopolymer blends and random and block copolymers. <i>Journal of Materials Chemistry C</i> , 2014, 2, 6743.	2.7	11
81	Film thickness effects on the distribution of high-molecular-weight heterotelechelic polymers. <i>European Physical Journal E</i> , 2002, 8, 121-128.	0.7	10
82	Combined multiaxial deformation of polymers with in situ small angle and wide angle x-ray scattering techniques. <i>Review of Scientific Instruments</i> , 2009, 80, 123906.	0.6	10
83	The effect of a diblock copolymer compatibiliser on the interface between immiscible polymers. <i>Physica B: Condensed Matter</i> , 1992, 180-181, 468-470.	1.3	9
84	Neutron reflection from a dimyristoylphosphatidylcholine monolayer adsorbed on a hydrophobised silicon support. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2001, 1511, 49-59.	1.4	9
85	Fluorine-containing linear block terpolymers: Synthesis and self-assembly in solution. <i>Journal of Polymer Science Part A</i> , 2011, 49, 414-422.	2.5	9
86	Multiaxial deformation of polyethylene and polyethylene/clay nanocomposites: <i>in situ</i> synchrotron small angle and wide angle X-ray scattering study. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011, 49, 669-677.	2.4	9
87	Low temperature solid state processing of pure P3HT fibers. <i>AIP Advances</i> , 2013, 3, .	0.6	9
88	Mechanism of stress induced crystallization of polyethylene. <i>Polymer</i> , 2019, 175, 25-31.	1.8	9
89	Inkjet printing of plasma surface-modified wool and cotton fabrics with plant-based inks. <i>Environmental Science and Pollution Research</i> , 2022, 29, 68357-68375.	2.7	9
90	Neutron reflection studies of interfaces between partially miscible and compatibilised immiscible polymers. <i>Faraday Discussions</i> , 1994, 98, 19-30.	1.6	8

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91	Partitioning of a heterotelechelic polystyrene to separate interfaces of thin films. <i>European Physical Journal E</i> , 2001, 5, 451-464.	0.7	8
92	Enabling Nanoparticle Networking in Semicrystalline Polymer Matrices. <i>ACS Applied Materials &amp; Interfaces</i> , 2012, 4, 3111-3121.	4.0	8
93	Shear alignment of fullerenes in nanotubular supramolecular complexes. <i>Polymer</i> , 2015, 56, 516-522.	1.8	8
94	Layer selective magnetometry in ultrathin magnetic structures by polarised neutron reflection. <i>Journal of Magnetism and Magnetic Materials</i> , 1997, 165, 46-51.	1.0	7
95	The ordering of semi-crystalline PS-b-hPB copolymers at a PS/PE interface and their effects on interfacial strength. <i>Polymer</i> , 1998, 39, 3099-3108.	1.8	7
96	Coalescence of droplets on chemical boundaries. <i>Europhysics Letters</i> , 2005, 72, 597-603.	0.7	7
97	Absorption performance of iodixanol-imprinted polymers in aqueous and blood plasma media. <i>Acta Biomaterialia</i> , 2010, 6, 2003-2012.	4.1	7
98	Harnessing Structure-Property Relationships for Poly(alkyl thiophene)-Fullerene Derivative Thin Films to Optimize Performance in Photovoltaic Devices. <i>Advanced Functional Materials</i> , 2016, 26, 1908-1920.	7.8	7
99	Neutron reflectivity investigations of semi-crystalline polymer interfaces. <i>Physica B: Condensed Matter</i> , 1997, 241-243, 1071-1073.	1.3	6
100	Neutron reflectivity studies of hot polymer melt interfaces. <i>Macromolecular Symposia</i> , 1998, 126, 331-342.	0.4	6
101	Recent Progress in the Understanding and Manipulation of Morphology in Polymer: Fullerene Photovoltaic Cells. , 0, , .		6
102	Unique density profile determination in thin films. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1994, 86, 165-170.	2.3	5
103	Polarised neutron reflectivity from a [UAs/Co] multilayer. <i>Physica B: Condensed Matter</i> , 1997, 234-236, 470-472.	1.3	5
104	Improvements to the polarised-neutron reflectometer CRISP. <i>Physica B: Condensed Matter</i> , 1997, 241-243, 148-150.	1.3	5
105	Microstructural characterisation of surfactant treated nylon fibres. <i>Polymer</i> , 2005, 46, 11424-11434.	1.8	5
106	Thermally switchable thin films of an ABC triblock copolymer of poly(n-butyl) Tj ETQq0 0 0 rGBT /Overlock 10 Tf 50 147 Td (methacrylate). <i>Polymer</i> , 2011, 52, 9673-9677.	3.1	5
107	Solid-state low-temperature extrusion of P3HT ribbons. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 2079-2086.	1.1	5
108	Solid state <sup>13</sup> C n.m.r. cross-polarization studies of a poly(methyl methacrylate)/solution chlorinated polyethylene blend. <i>Polymer</i> , 1992, 33, 423-425.	1.8	4

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109	Resonant x-ray scattering from a magnetic multilayer reflection grating. Applied Physics Letters, 2005, 86, 112502.	1.5	4
110	Inclined nanoimprinting lithography-based 3D nanofabrication. Journal of Micromechanics and Microengineering, 2011, 21, 065036.	1.5	4
111	Penetration depth of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> measured by polarised neutron reflectometry. Physica B: Condensed Matter, 1998, 248, 163-165.	1.3	3
112	Effect of Mechanical Confinement on an Immiscible Polymer-Polymer Interface. Macromolecular Chemistry and Physics, 2001, 202, 2275-2280.	1.1	3
113	Mechanosynthesis of three-dimensional replicated nanostructures by nanolithography-based molecular manipulation. , 2010, , .		3
114	Phase Morphology and Molecular Structure Correlations in Model Fullerene-Polymer Nanocomposites. Materials Science Forum, 0, 714, 63-66.	0.3	3
115	Roughness correlation and interdiffusion in thin films of polymer chains. , 1999, 37, 2862.		3
116	Neutron reflectivity of polymer-plasticiser diffusion. Macromolecular Symposia, 2002, 190, 1-8.	0.4	2
117	Structure of flexible telechelic zwitterions in solutions. Physica B: Condensed Matter, 2004, 350, E975-E977.	1.3	2
118	Chromatic Conductive Polymer Nanocomposites of Poly (p-Phenylene Ethynylene)s and Single-Walled Carbon Nanotubes. Journal of Composites Science, 2021, 5, 158.	1.4	2
119	Anomalous Concentration Effects of Zwitterionic Telechelic Polymer Solutions in Electric Fields. Macromolecular Chemistry and Physics, 2002, 203, 89-99.	1.1	1
120	Polarised neutron reflectometry studies of flux penetration in superconducting Nb. Physica B: Condensed Matter, 1997, 241-243, 1104-1106.	1.3	0
121	Electric Field Induced Patterning of Polymer Films. Materials Research Society Symposia Proceedings, 2001, 705, 871.	0.1	0
122	Electric Field Induced Patterning of Polymer Films.. Materials Research Society Symposia Proceedings, 2001, 707, 971.	0.1	0
123	Neutron reflectivity studies of ionomer blends. Applied Physics A: Materials Science and Processing, 2002, 74, s336-s338.	1.1	0
124	Fabrication of Three-Dimensional Nano-Patterns by Inclined Nanoimprinting Lithography. , 2007, , .		0
125	The use of surface-initiated polymerization to reduce template feature size and facilitate fabrication of 3D freestanding nanostructures. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	0
126	Use of Taylor rod-on-anvil impact experiments to investigate high strain rate behavior in polyolefins. AIP Conference Proceedings, 2017, , .	0.3	0



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127	Robust immune responses to SARS-CoV-2 in a pediatric patient with B-Cell ALL receiving tisagenlecleucel. <i>Pediatric Hematology and Oncology</i> , 2022, , 1-9.	0.3	0