David G Bucknall

List of Publications by Year
in descending order

127 papers	4,123 citations	117625 34 h-index	128289 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. Journal of the Chemical Society, Faraday Transactions, 1997, 93, 3899-3917.	1.7	319
2	Detonation Nanodiamond and Onionâ€Likeâ€Carbonâ€Embedded Polyaniline for Supercapacitors. Advanced Functional Materials, 2010, 20, 3979-3986.	14.9	245
3	Amplified Optical Nonlinearity in a Self-Assembled Double-Strand Conjugated Porphyrin Polymer Ladder. Journal of the American Chemical Society, 2002, 124, 9712-9713.	13.7	217
4	Evidence for Capillary Waves at Immiscible Polymer/Polymer Interfaces. Physical Review Letters, 1997, 78, 3693-3696.	7.8	195
5	Chain End Effects and Dewetting in Thin Polymer Films. Macromolecules, 1996, 29, 4305-4313.	4.8	160
6	Interfacial Instability Driven by Dispersive Forces: The Early Stages of Spinodal Dewetting of a Thin Polymer Film on a Polymer Substrate. Physical Review Letters, 1998, 81, 5173-5176.	7.8	151
7	CHEMISTRY: Polymers Get Organized. Science, 2003, 302, 1904-1905.	12.6	108
8	Jetting Micron-Scale Droplets onto Chemically Heterogeneous Surfaces. Langmuir, 2003, 19, 9818-9822.	3.5	98
9	Influence of interfaces on thin polymer film behaviour. Progress in Materials Science, 2004, 49, 713-786.	32.8	94
10	Two methods for amplifying the optical nonlinearity of a conjugated porphyrin polymer: transmetallation and self-assembly. Journal of Materials Chemistry, 2003, 13, 2796-2808.	6.7	92
11	Annealing effects on thickness of polystyrene thin films as studied by neutron reflectivity. Polymer, 2003, 44, 3769-3773.	3.8	89
12	Temporallyâ€resolved inkjet drop impaction on surfaces. AICHE Journal, 2007, 53, 2606-2617.	3.6	85
13	Nanoporous layered silicate AMH-3/cellulose acetate nanocomposite membranes for gas separations. Journal of Membrane Science, 2013, 441, 129-136.	8.2	85
14	Nanocomposites of Carbon Nanotube Fibers Prepared by Polymer Crystallization. ACS Applied Materials & Interfaces, 2010, 2, 1642-1647.	8.0	82
15	Tuning Molecular Relaxation for Vertical Orientation in Cylindrical Block Copolymer Films via Sharp Dynamic Zone Annealing. Macromolecules, 2012, 45, 7107-7117.	4.8	78
16	Plastics as a materials system in a circular economy. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190268.	3.4	76
17	Molecular dynamics simulation study of P (VP-co-HEMA) hydrogels: Effect of water content on equilibrium structures and mechanical properties. Biomaterials, 2009, 30, 6130-6141.	11.4	73
18	Spontaneous Formation of Ordered Lateral Patterns in Polymer Thin-Film Structures. Advanced Functional Materials, 2004, 14, 1081-1088.	14.9	69

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19	Stable Solutionâ€Processed Molecular nâ€Channel Organic Fieldâ€Effect Transistors. Advanced Materials, 2012, 24, 4445-4450.	21.0	67
20	Structure of Polymer Brushes under Shear Flow in a Good Solvent. Macromolecules, 2000, 33, 1120-1122.	4.8	57
21	The crystal structure of poly(ethylene furanoate). Polymer, 2016, 102, 308-314.	3.8	55
22	Thickness dependence of the total magnetic moment per atom in the Cu/Ni/Cu/Si(001) system. Physical Review B, 1997, 55, 11422-11431.	3.2	54
23	Fluorescence quenching of a poly(para-phenylene ethynylenes) by C60 fullerenes. Journal of Photochemistry and Photobiology A: Chemistry, 2012, 249, 41-46.	3.9	53
24	Solid Inclusion Complexes of Î±-Cyclodextrin and Perdeuterated Poly(oxyethylene). Macromolecules, 2005, 38, 2261-2270.	4.8	45
25	Linear and non-linear optical properties of the different Langmuirâ€“Blodgett phases of CnH2n+1â€“Q3CNQ. Journal of Materials Chemistry, 1995, 5, 975-980.	6.7	44
26	Surfaceâ€Induced Polymer Crystallization in High Volume Fraction Aligned Carbon Nanotubeâ€“Polymer Composites. Macromolecular Chemistry and Physics, 2010, 211, 1003-1011.	2.2	41
27	A Review of Sensing Technologies for Non-Destructive Evaluation of Structural Composite Materials. Journal of Composites Science, 2021, 5, 319.	3.0	40
28	Equilibrium concentration profiles of physically end tethered polystyrene molecules at the air-polymer interface. Polymer, 1997, 38, 87-98.	3.8	38
29	Structureâ€“Property Relationships Directing Transport and Charge Separation in Isoindigo Polymers. Macromolecules, 2016, 49, 4008-4022.	4.8	38
30	Real-Time Measurement of Polymer Diffusion Coefficients Using Neutron Reflection. Macromolecules, 1999, 32, 5453-5456.	4.8	37
31	Uniform Nanoscopic Polystyrene Patterns Produced from a Microscopic Mold. Nano Letters, 2004, 4, 1513-1519.	9.1	37
32	The Kinetics of Penetration of Grafted Polymers into a Network. Macromolecules, 1999, 32, 5106-5114.	4.8	36
33	Control of drop positioning using chemical patterning. Applied Physics Letters, 2005, 87, 024103.	3.3	34
34	Effect of Monomeric Sequence on Mechanical Properties of P(VP-co-HEMA) Hydrogels at Low Hydration. Journal of Physical Chemistry B, 2009, 113, 6604-6612.	2.6	34
35	Synthesis and properties of a novel anisotropic self-inflating hydrogel tissue expander. Acta Biomaterialia, 2011, 7, 1126-1132.	8.3	34
36	Drop-on-demand drop formation of colloidal suspensions. International Journal of Multiphase Flow, 2012, 38, 17-26.	3.4	34

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37	Swelling behavior and network structure of hydrogels synthesized using controlled UVâ€initiated free radical polymerization. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 1450-1462.	2.1	31
38	Droplet Spreading on Microstriped Surfaces. Journal of Physical Chemistry B, 2005, 109, 8973-8977.	2.6	30
39	Thermo-cross-linkable fullerene for long-term stability of photovoltaic devices. Journal of Materials Chemistry A, 2015, 3, 21856-21863.	10.3	30
40	Hisactophilin-mediated binding of actin to lipid lamellae: a neutron reflectivity study of protein membrane coupling. Biophysical Journal, 1996, 71, 811-823.	0.5	28
41	A neutron reflectometry study of polystyrene network interfaces. European Physical Journal B, 1998, 3, 83-96.	1.5	27
42	High-shear-rate capillary viscometer for inkjet inks. Review of Scientific Instruments, 2010, 81, 065106.	1.3	26
43	Morphology Control in Films of Isoindigo Polymers by Side-Chain and Molecular Weight Effects. ACS Applied Materials & Interfaces, 2017, 9, 13357-13368.	8.0	26
44	Extraction of Process-Structure Evolution Linkages from X-ray Scattering Measurements Using Dimensionality Reduction and Time Series Analysis. Integrating Materials and Manufacturing Innovation, 2017, 6, 147-159.	2.6	25
45	Synchrotron X-ray scattering study on amorphous poly(ethyleneÂfuranoate) under uniaxial deformation. Polymer, 2018, 139, 60-67.	3.8	25
46	The compatibilizing effect of diblock copolymer on the morphology of immiscible polymer blends. Polymer, 1992, 33, 4419-4422.	3.8	24
47	Role of Conformation in Ï€â€“Ï€ Interactions and Polymer/Fullerene Miscibility. Journal of Physical Chemistry B, 2011, 115, 8989-8995.	2.6	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. Biophysical Journal, 2000, 79, 1428-1437.	0.5	22
49	Interface width of low-molecular-weight immiscible polymers. Journal of Physics Condensed Matter, 2001, 13, 10269-10277.	1.8	22
50	Structureâ€“processingâ€“property correlations in solution-processed, small-molecule, organic solar cells. Journal of Materials Chemistry C, 2013, 1, 5250.	5.5	22
51	Investigation of the melt interface between polyethylene and polystyrene using neutron reflectivity. Polymer, 1997, 38, 985-989.	3.8	21
52	C60 fullerene inclusions in low-molecular-weight polystyreneâ€“poly(dimethylsiloxane) diblock copolymers. Polymer, 2009, 50, 4199-4204.	3.8	20
53	Development of a Novel Anisotropic Self-Inflating Tissue Expander. Plastic and Reconstructive Surgery, 2012, 129, 79-88.	1.4	19
54	Large area ordered lateral patterns in confined polymer thin films. European Polymer Journal, 2004, 40, 981-986.	5.4	18

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55	Phase behavior of blends of PCBM with amorphous polymers with different aromaticity. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 994-1001.	2.1	18
56	Early stages of oligomerâ€“polymer diffusion. Chemical Engineering Science, 2001, 56, 5473-5483.	3.8	17
57	Neutron Reflection from 2,4-Bis(4-(N-methyl-N-octylamino)phenyl)squaraine at the Airâ^'Water Interface and the Linear and Nonlinear Optical Properties of Its Langmuirâ^'Blodgett and Spun-Coated Films. Langmuir, 1997, 13, 1629-1633.	3.5	16
58	Chain confinement effects on interdiffusion in polymer multilayers. Physical Review E, 1999, 59, 885-888.	2.1	16
59	Î³â€Form Transcrystals of Poly(propylene) Induced by Individual Carbon Nanotubes. Macromolecular Chemistry and Physics, 2010, 211, 1348-1354.	2.2	16
60	Inclined nanoimprinting lithography for 3D nanopatterning. Nanotechnology, 2011, 22, 225302.	2.6	16
61	Neutron reflectivity of polymer interfaces. Journal of Physics and Chemistry of Solids, 1999, 60, 1273-1277.	4.0	15
62	Interfacial structures of block and graft copolymers with lamellar microphase-separated structures. Physica B: Condensed Matter, 2000, 283, 12-16.	2.7	15
63	Silicon Oxide Nanowires: Facile and Controlled Large Area Fabrication of Vertically Oriented Silicon Oxide Nanowires for Photoluminescence and Sensor Applications. ACS Applied Materials & Interfaces, 2013, 5, 8932-8938.	8.0	15
64	Flexible Low-Density Polyethyleneâ€“BaTiO‹sub›3‹/sub› Nanoparticle Composites for Monitoring Leakage Current in High-Tension Equipment. ACS Applied Nano Materials, 2021, 4, 2413-2422.	5.0	15
65	Segregation behaviour of deuterated poly(styrene-block-methyl methacrylate) diblock copolymer in the presence of poly(methyl methacrylate) homopolymer. Polymer, 1993, 34, 451-458.	3.8	14
66	Roughness correlation and interdiffusion in thin films of polymer chains. Journal of Polymer Science, Part B: Polymer Physics, 1999, 37, 2862-2874.	2.1	14
67	Conformational Changes in SP-B as a Function of Surface Pressure. Biophysical Journal, 2003, 85, 2624-2632.	0.5	14
68	Nucleated dewetting of thin polymer films. Applied Physics A: Materials Science and Processing, 2002, 74, s383-s385.	2.3	13
69	Synergetic enhancement of organic solar cell thermal stability by wire bar coating and light processing. Journal of Materials Chemistry C, 2015, 3, 9551-9558.	5.5	13
70	Simultaneous WAXS/SAXS study on semi-crystalline Poly(ethylene furanoate) under uniaxial stretching. Polymer, 2018, 143, 228-236.	3.8	13
71	Thermally driven collapse of a polymer brush in a polymer matrix. Physical Review E, 1999, 59, 4434-4440.	2.1	12
72	Surface segregation from polystyrene networks. Journal of Physics Condensed Matter, 2000, 12, 5129-5142.	1.8	12

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73	Neutron reflectivity studies of the structure of polymer/polymer and polymer/substrate interfaces at the nanometer level. Journal of Materials Chemistry, 2000, 10, 127-132.	6.7	12
74	Interface dependent magnetic moments in Cu/Co,Ni/Cu/Si(001) epitaxial structures. Journal of Magnetism and Magnetic Materials, 2007, 313, 89-97.	2.3	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. Theoretical Chemistry Accounts, 2012, 131, 1.	1.4	12
76	Solventless processing of conjugated polymersâ€"A review. Synthetic Metals, 2014, 197, 23-33.	3.9	12
77	Real-time neutron reflectivity study of the early stages of diffusion into and dissolution of glassy polymers. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 3267-3281.	2.1	11
78	Cleft palate repair with the use of osmotic expanders: a response. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2008, 61, 220-221.	1.0	11
79	Physical mixtures of small-molecule and polymeric organic semiconductors: comparing thermodynamic behavior and thin-film structure. Journal of Materials Chemistry C, 2013, 1, 778-785.	5.5	11
80	Phosphorescent light-emitting diodes using triscarbazole/bis(oxadiazole) hosts: comparison of homopolymer blends and random and block copolymers. Journal of Materials Chemistry C, 2014, 2, 6743.	5.5	11
81	Film thickness effects on the distribution of high-molecular-weight heterotelechelic polymers. European Physical Journal E, 2002, 8, 121-128.	1.6	10
82	Combined multiaxial deformation of polymers with in situ small angle and wide angle x-ray scattering techniques. Review of Scientific Instruments, 2009, 80, 123906.	1.3	10
83	The effect of a dibock copolymer compatibiliser on the interface between immiscible polymers. Physica B: Condensed Matter, 1992, 180-181, 468-470.	2.7	9
84	Neutron reflection from a dimyristoylphosphatidylcholine monolayer adsorbed on a hydrophobised silicon support. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1511, 49-59.	2.6	9
85	Fluorineâ€containing linear block terpolymers: Synthesis and selfâ€assembly in solution. Journal of Polymer Science Part A, 2011, 49, 414-422.	2.3	9
86	Multiaxial deformation of polyethylene and polyethylene/clay nanocomposites: in situ synchrotron small angle and wide angle Xâ€ray scattering study. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 669-677.	2.1	9
87	Low temperature solid state processing of pure P3HT fibers. AIP Advances, 2013, 3, .	1.3	9
88	Mechanism of stress induced crystallization of polyethylene. Polymer, 2019, 175, 25-31.	3.8	9
89	Inkjet printing of plasma surfaceâ€"modified wool and cotton fabrics with plant-based inks. Environmental Science and Pollution Research, 2022, 29, 68357-68375.	5.3	9
90	Neutron reflection studies of interfaces between partially miscible and compatibilised immiscible polymers. Faraday Discussions, 1994, 98, 19-30.	3.2	8

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91	Partitioning of a heterotelechelic polystyrene to separate interfaces of thin films. European Physical Journal E, 2001, 5, 451-464.	1.6	8
92	Enabling Nanoparticle Networking in Semicrystalline Polymer Matrices. ACS Applied Materials & Interfaces, 2012, 4, 3111-3121.	8.0	8
93	Shear alignment of fullerenes in nanotubular supramolecular complexes. Polymer, 2015, 56, 516-522.	3.8	8
94	Layer selective magnetometry in ultrathin magnetic structures by polarised neutron reflection. Journal of Magnetism and Magnetic Materials, 1997, 165, 46-51.	2.3	7
95	The ordering of semi-crystalline PS-b-hPB copolymers at a PS/PE interface and their effects on interfacial strength. Polymer, 1998, 39, 3099-3108.	3.8	7
96	Coalescence of droplets on chemical boundaries. Europhysics Letters, 2005, 72, 597-603.	2.0	7
97	Absorption performance of iodixanol-imprinted polymers in aqueous and blood plasma media. Acta Biomaterialia, 2010, 6, 2003-2012.	8.3	7
98	Harnessing Structureâ€“Property Relationshipsfor Poly(alkyl thiophene)â€“Fullerene Derivative Thin Filmsto Optimize Performance in Photovoltaic Devices. Advanced Functional Materials, 2016, 26, 1908-1920.	14.9	7
99	Neutron reflectivity investigations of semi-crystalline polymer interfaces. Physica B: Condensed Matter, 1997, 241-243, 1071-1073.	2.7	6
100	Neutron reflectivity studies of hot polymer melt interfaces. Macromolecular Symposia, 1998, 126, 331-342.	0.7	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. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1994, 86, 165-170.	4.7	5
103	Polarised neutron reflectivity from a [UAs/Co] multilayer. Physica B: Condensed Matter, 1997, 234-236, 470-472.	2.7	5
104	Improvements to the polarised-neutron reflectometer CRISP. Physica B: Condensed Matter, 1997, 241-243, 148-150.	2.7	5
105	Microstructural characterisation of surfactant treated nylon fibres. Polymer, 2005, 46, 11424-11434.	3.8	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 2011, 257, 9673-9677.	6.1	5
107	Solid-state low-temperature extrusion of P3HT ribbons. Applied Physics A: Materials Science and Processing, 2014, 117, 2079-2086.	2.3	5
108	Solid state 13C n.m.r. cross-polarization studies of a poly(methyl methacrylate)/solution chlorinated polyethylene blend. Polymer, 1992, 33, 423-425.	3.8	4

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109	Resonant x-ray scattering from a magnetic multilayer reflection grating. Applied Physics Letters, 2005, 86, 112502.	3.3	4
110	Inclined nanoimprinting lithography-based 3D nanofabrication. Journal of Micromechanics and Microengineering, 2011, 21, 065036.	2.6	4
111	Penetration depth of YBa2Cu3O7 measured by polarised neutron reflectometry. Physica B: Condensed Matter, 1998, 248, 163-165.	2.7	3
112	Effect of Mechanical Confinement on an Immiscible Polymer-Polymer Interface. Macromolecular Chemistry and Physics, 2001, 202, 2275-2280.	2.2	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. Journal of Polymer Science, Part B: Polymer Physics, 1999, 37, 2862-2874.	2.1	3
116	Neutron reflectivity of polymer-plasticiser diffusion. Macromolecular Symposia, 2002, 190, 1-8.	0.7	2
117	Structure of flexible telechelic zwitterions in solutions. Physica B: Condensed Matter, 2004, 350, E975-E977.	2.7	2
118	Chromatic Conductive Polymer Nanocomposites of Poly (p-Phenylene Ethynylene)s and Single-Walled Carbon Nanotubes. Journal of Composites Science, 2021, 5, 158.	3.0	2
119	Anomalous Concentration Effects of Zwitterionic Telechelic Polymer Solutions in Electric Fields. Macromolecular Chemistry and Physics, 2002, 203, 89-99.	2.2	1
120	Polarised neutron reflectometry studies of flux penetration in superconducting Nb. Physica B: Condensed Matter, 1997, 241-243, 1104-1106.	2.7	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.	2.3	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.	1.9	0
126	Use of Taylor rod-on-anvil impact experiments to investigate high strain rate behavior in polyolefins. AIP Conference Proceedings, 2017, , .	0.4	0

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127	Robust immune responses to SARS-CoV-2 in a pediatric patient with B-Cell ALL receiving tisagenlecleucel. Pediatric Hematology and Oncology, 2022, , 1-9.	0.8	0