

Lorraine F Francis

List of Publications by Year in descending order

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95
papers

3,683
citations

147566

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133063

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95
docs citations

95
times ranked

4960
citing authors

#	ARTICLE	IF	CITATIONS
1	Band Gap Tuning of Films of Undoped ZnO Nanocrystals by Removal of Surface Groups. <i>Nanomaterials</i> , 2022, 12, 565.	1.9	7
2	Capillary flow of evaporating liquid solutions in open rectangular microchannels. <i>Journal of Fluid Mechanics</i> , 2022, 938, .	1.4	9
3	The colloidal nature of complex fluids enhances bacterial motility. <i>Nature</i> , 2022, 603, 819-823.	13.7	33
4	Capillary-flow dynamics in open rectangular microchannels. <i>Journal of Fluid Mechanics</i> , 2021, 911, .	1.4	16
5	Roll-to-roll micromolding of UV curable coatings. <i>Journal of Coatings Technology Research</i> , 2021, 18, 627-639.	1.2	2
6	Block Copolymer and Nanosilica-Modified Epoxy Nanocomposites. <i>ACS Applied Polymer Materials</i> , 2021, 3, 4156-4167.	2.0	13
7	Solution-based, additive fabrication of flush metal conductors in plastic substrates by printing and plating in two-level capillary channels. <i>Flexible and Printed Electronics</i> , 2021, 6, 045005.	1.5	3
8	Contact line dynamics in curtain coating of non-Newtonian liquids. <i>Physics of Fluids</i> , 2021, 33, .	1.6	10
9	Poly(methyl methacrylate) Films with High Concentrations of Silicon Quantum Dots for Visibly Transparent Luminescent Solar Concentrators. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 4572-4578.	4.0	36
10	Inkjet-printed, self-aligned organic Schottky diodes on imprinted plastic substrates. <i>Flexible and Printed Electronics</i> , 2020, 5, 015006.	1.5	15
11	Adhesion Strength of Block Copolymer Toughened Epoxy on Aluminum. <i>ACS Applied Polymer Materials</i> , 2020, 2, 464-474.	2.0	26
12	Self-Aligned Capillarity-Assisted Printing of High Aspect Ratio Flexible Metal Conductors: Optimizing Ink Flow, Plating, and Mechanical Adhesion. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 22107-22122.	1.8	8
13	Cavity filling with shear-thinning liquids. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	5
14	Near-IR sintering of conductive silver nanoparticle ink with in situ resistance measurement. <i>Journal of Coatings Technology Research</i> , 2019, 16, 1699-1705.	1.2	5
15	Sustainable near UV-curable acrylates based on natural phenolics for stereolithography 3D printing. <i>Polymer Chemistry</i> , 2019, 10, 1067-1077.	1.9	94
16	Capillary Flow with Evaporation in Open Rectangular Microchannels. <i>Langmuir</i> , 2019, 35, 8131-8143.	1.6	33
17	Effect of viscosity on liquid curtain stability. <i>AIChE Journal</i> , 2018, 64, 1448-1457.	1.8	16
18	Open-channel microfluidic diodes based on two-tier junctions. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	6

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19	High-Resolution, High-Aspect-Ratio Printed and Plated Metal Conductors Utilizing Roll-to-Roll Microscale UV Imprinting with Prototype Imprinting Stamps. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 16335-16346.	1.8	17
20	Self-aligned inkjet printing of resistors and low-pass resistor-capacitor filters on roll-to-roll imprinted plastics with resistances ranging from 10 to $10^6 \Omega$. <i>Flexible and Printed Electronics</i> , 2018, 3, 045003.	1.5	18
21	Capillary Coatings: Flow and Drying Dynamics in Open Microchannels. <i>Langmuir</i> , 2018, 34, 7624-7639.	1.6	26
22	Self-aligned capillarity-assisted printing of top-gate thin-film transistors on plastic. <i>Flexible and Printed Electronics</i> , 2018, 3, 035004.	1.5	13
23	Effect of Nanocrystal Size and Carbon on Grain Growth during Annealing of Copper Zinc Tin Sulfide Nanocrystal Coatings. <i>Chemistry of Materials</i> , 2017, 29, 1676-1683.	3.2	31
24	Dynamic self-assembly of charged colloidal strings and walls in simple fluid flows. <i>Soft Matter</i> , 2017, 13, 1681-1692.	1.2	9
25	Effect of particle size distribution on stress development and microstructure of particulate coatings. <i>Journal of Coatings Technology Research</i> , 2017, 14, 455-465.	1.2	8
26	Dynamics of Capillary-Driven Flow in 3D Printed Open Microchannels. <i>Langmuir</i> , 2017, 33, 2949-2964.	1.6	34
27	Influence of the drying conditions on the particle distribution in particle-filled polymer films: Predictive simulation of the particle distribution during drying. <i>Journal of Composite Materials</i> , 2017, 51, 3391-3403.	1.2	12
28	Scalable, Self-Aligned Printing of Flexible Graphene Microsupercapacitors. <i>Advanced Energy Materials</i> , 2017, 7, 1700285.	10.2	167
29	Copper-Zinc-Tin Sulfide Thin Films via Annealing of Ultrasonic Spray Deposited Nanocrystal Coatings. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18865-18871.	4.0	12
30	High-Resolution Transfer Printing of Graphene Lines for Fully Printed, Flexible Electronics. <i>ACS Nano</i> , 2017, 11, 7431-7439.	7.3	116
31	Modulus- and Surface-Energy-Tunable Thiolene for UV Micromolding of Coatings. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24976-24986.	4.0	14
32	Visualization and simulation of the transfer process of index-matched silica microparticle inks for gravure printing. <i>AIChE Journal</i> , 2017, 63, 1419-1429.	1.8	5
33	Synergistic Toughening of Epoxy Modified by Graphene and Block Copolymer Micelles. <i>Macromolecules</i> , 2016, 49, 9507-9520.	2.2	63
34	Printed, Self-Aligned Side-Gate Organic Transistors with a Sub-5 μm Gate Channel Distance on Imprinted Plastic Substrates. <i>Advanced Electronic Materials</i> , 2016, 2, 1600293.	2.6	33
35	Engineering superior toughness in commercially viable block copolymer modified epoxy resin. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016, 54, 189-204.	2.4	46
36	Zeolite Membranes: Oriented MFI Membranes by Gel-Less Secondary Growth of Sub-100 nm MFI-Nanosheet Seed Layers (<i>Adv. Mater.</i> 21/2015). <i>Advanced Materials</i> , 2015, 27, 3339-3339.	11.1	0

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37	Oriented MFI Membranes by Gelâ€Less Secondary Growth of Subâ€100 nm MFIâ€Nanosheet Seed Layers. <i>Advanced Materials</i> , 2015, 27, 3243-3249.	11.1	182
38	Stress Development in Hard Particle Coatings in the Absence of Lateral Drying. <i>Journal of the American Ceramic Society</i> , 2015, 98, 2214-2222.	1.9	13
39	Wettability Contrast Gravure Printing. <i>Advanced Materials</i> , 2015, 27, 7420-7425.	11.1	26
40	A Selfâ€Aligned Strategy for Printed Electronics: Exploiting Capillary Flow on Microstructured Plastic Surfaces. <i>Advanced Electronic Materials</i> , 2015, 1, 1500137.	2.6	43
41	Deformation Processes in Block Copolymer Toughened Epoxies. <i>Macromolecules</i> , 2015, 48, 3672-3684.	2.2	43
42	Evaluating sag resistance with a multinotched applicator: correlation with surface flow measurements and practical recommendations. <i>Journal of Coatings Technology Research</i> , 2015, 12, 809-817.	1.2	8
43	Sag in drying coatings: Prediction and real time measurement with particle tracking. <i>Progress in Organic Coatings</i> , 2015, 86, 49-58.	1.9	10
44	Formation of Copper Zinc Tin Sulfide Thin Films from Colloidal Nanocrystal Dispersions via Aerosol-Jet Printing and Compaction. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 11526-11535.	4.0	27
45	Water-based coatings for 3D printed parts. <i>Journal of Coatings Technology Research</i> , 2015, 12, 889-897.	1.2	18
46	High-Resolution, High-Aspect Ratio Conductive Wires Embedded in Plastic Substrates. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 1841-1847.	4.0	39
47	Screen Printing of Highly Loaded Silver Inks on Plastic Substrates Using Silicon Stencils. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 12619-12624.	4.0	114
48	Allâ€Printed, Foldable Organic Thinâ€Film Transistors on Glassine Paper. <i>Advanced Materials</i> , 2015, 27, 7058-7064.	11.1	133
49	A Raman spectroscopic method to find binder distribution in electrodes during drying. <i>Journal of Coatings Technology Research</i> , 2014, 11, 11-17.	1.2	71
50	Gravure Printing of Graphene for Largeâ€Area Flexible Electronics. <i>Advanced Materials</i> , 2014, 26, 4533-4538.	11.1	298
51	Microstructure and performance of block copolymer modified epoxy coatings. <i>Progress in Organic Coatings</i> , 2014, 77, 1145-1154.	1.9	30
52	Facile Method for Fabricating Flexible Substrates with Embedded, Printed Silver Lines. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 1306-1312.	4.0	21
53	Stress development and film formation in multiphase composite latexes. <i>Journal of Coatings Technology Research</i> , 2014, 11, 827-839.	1.2	18
54	Microstructure Evolution and Crystal Growth in Cu ₂ ZnSnS ₄ Thin Films Formed By Annealing Colloidal Nanocrystal Coatings. <i>Chemistry of Materials</i> , 2014, 26, 3191-3201.	3.2	66

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55	Effect of block copolymer concentration and core composition on toughening epoxies. <i>Polymer</i> , 2014, 55, 4172-4181.	1.8	48
56	Depthwise Viscosity Gradients in UV-Cured Epoxy Coatings. <i>Macromolecular Materials and Engineering</i> , 2013, 298, 145-152.	1.7	13
57	Solution-processable exfoliated zeolite nanosheets purified by density gradient centrifugation. <i>AICHE Journal</i> , 2013, 59, 3458-3467.	1.8	80
58	Drying and cracking of soft latex coatings. <i>Journal of Coatings Technology Research</i> , 2013, 10, 441-451.	1.2	31
59	Effects of freezing and thawing on the microstructure of latex paints. <i>Journal of Colloid and Interface Science</i> , 2013, 392, 183-193.	5.0	3
60	Optimization of Aerosol Jet Printing for High-Resolution, High-Aspect Ratio Silver Lines. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 4856-4864.	4.0	296
61	Role of Localized Network Damage in Block Copolymer Toughened Epoxies. <i>ACS Macro Letters</i> , 2012, 1, 338-342.	2.3	57
62	Radical-cured block copolymer-modified thermosets. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011, 49, 540-550.	2.4	8
63	Modeling the Depthwise Gradient in Curing and Skin Formation in Wrinkling Coatings. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 3358-3365.	1.8	2
64	Silica nanoparticle dispersions in homopolymer versus block copolymer. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007, 45, 2284-2299.	2.4	78
65	Calcium Carbonate Formation on Cross-Linked Polyethylene (PEX) and Polypropylene Random Copolymer (PP-r). <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2006, 128, 251-254.	1.1	11
66	Apatite Converted from 3-D Ordered Macroporous Sol-Gel Bioactive Glass (3DOM-BG) Particles. <i>Journal of the American Ceramic Society</i> , 2005, 88, 587-592.	1.9	11
67	Mechanical properties of polymer-ceramic nanocomposite coatings by depth-sensing indentation. <i>Polymer Engineering and Science</i> , 2005, 45, 207-216.	1.5	14
68	Stress development in drying fibers and spheres. <i>Journal of Applied Polymer Science</i> , 2003, 90, 3934-3944.	1.3	7
69	Electrical and optical properties of ceramic-polymer nanocomposite coatings. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003, 41, 1744-1761.	2.4	58
70	Effect of lamp cycling on conversion and stress development in ultraviolet-cured acrylate coatings. <i>Journal of Applied Polymer Science</i> , 2002, 84, 2784-2793.	1.3	28
71	Porous Composites for Adhering Artificial Cartilage to Bone. <i>Materials Research Society Symposia Proceedings</i> , 2001, 711, 1.	0.1	1
72	Electrical and mechanical behavior of carbon black-filled poly(vinyl acetate) latex-based composites. <i>Polymer Engineering and Science</i> , 2001, 41, 1947-1962.	1.5	72

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73	Lowering the percolation threshold of conductive composites using particulate polymer microstructure. Journal of Applied Polymer Science, 2001, 80, 692-705.	1.3	118
74	Lowering the percolation threshold of conductive composites using particulate polymer microstructure. , 2001, 80, 692.		1
75	Lowering the percolation threshold of conductive composites using particulate polymer microstructure. Journal of Applied Polymer Science, 2001, 80, 692-705.	1.3	2
76	Figures of Merit for Electrically Conductive Polymer Composites. Materials Research Society Symposia Proceedings, 2000, 661, KK5.2.1.	0.1	0
77	Bioactive Glass Paste in Molars of Mini-Pigs: An In Vivo Study. Materials Research Society Symposia Proceedings, 2000, 662, 1.	0.1	0
78	Apatite Growth on Bioactive Glass in Artificial Saliva. Materials Research Society Symposia Proceedings, 2000, 662, 1.	0.1	1
79	Modeling Stress and Failure in Shrinking Coatings. Materials Research Society Symposia Proceedings, 2000, 653, 1.	0.1	1
80	Modulus Determination of Polymer Matrix Composites: Comparison of Nanoindentation and Dynamic Mechanical Analysis. Materials Research Society Symposia Proceedings, 2000, 649, 351.	0.1	2
81	Electrical and mechanical property transitions in carbon-filled poly(vinylpyrrolidone). Journal of Materials Research, 1999, 14, 4132-4135.	1.2	21
82	Effect of Solution Processing on PZT Thin Films Prepared by a Hybrid MOD Solution Deposition Route. , 1999, 3, 261-268.		2
83	A study of stress development in aqueous gelatin coatings. Journal of Applied Polymer Science, 1999, 73, 553-561.	1.3	34
84	Alumina/Epoxy Interpenetrating Phase Composite Coatings: I, Processing and Microstructural Development. Journal of the American Ceramic Society, 1998, 81, 3109-3116.	1.9	6
85	Indentation measurements using a dynamic mechanical analyzer. Polymer Engineering and Science, 1998, 38, 1529-1535.	1.5	13
86	PROCESSING AND CHARACTERIZATION OF PIEZOELECTRIC MATERIALS AND INTEGRATION INTO MICROELECTROMECHANICAL SYSTEMS. Annual Review of Materials Research, 1998, 28, 563-597.	5.5	273
87	In situstress measurement apparatus for liquid applied coatings. Review of Scientific Instruments, 1997, 68, 4564-4568.	0.6	54
88	Macroporous ceramics from ceramic-polymer dispersion methods. AIChE Journal, 1997, 43, 2878-2888.	1.8	22
89	The effects of processing variables on stress development in ultraviolet-cured coatings. Journal of Applied Polymer Science, 1997, 66, 1267-1277.	1.3	41
90	Predicting drying in coatings that react and gel: Drying regime maps. AIChE Journal, 1996, 42, 55-67.	1.8	52

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91	Rheological Property and Stress Development during Drying of Tape-Cast Ceramic Layers. Journal of the American Ceramic Society, 1996, 79, 3225-3234.	1.9	94
92	Measurement of Porosity in Ceramic Coatings by Thermogravimetric Volatilization of Liquids. Journal of the American Ceramic Society, 1996, 79, 3317-3320.	1.9	4
93	The Evolution of Sol-Gel Films in the Environmental Scanning Electron Microscope.. Materials Research Society Symposia Proceedings, 1993, 321, 561.	0.1	1
94	Engaging First-Year Students with a Hands-On Course using Student-Driven Projects. , 0, , .		2
95	Integrating 3-D Printing and CAD into a Materials Science and Engineering Curriculum. , 0, , .		0