Lorraine F Francis

List of Publications by Year in descending order

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LODDAINE E EDANCIS

#	Article	IF	CITATIONS
1	Band Cap Tuning of Films of Undoped ZnO Nanocrystals by Removal of Surface Groups. Nanomaterials, 2022, 12, 565.	4.1	7
2	Capillary flow of evaporating liquid solutions in open rectangular microchannels. Journal of Fluid Mechanics, 2022, 938, .	3.4	9
3	The colloidal nature of complex fluids enhances bacterial motility. Nature, 2022, 603, 819-823.	27.8	33
4	Capillary-flow dynamics in open rectangular microchannels. Journal of Fluid Mechanics, 2021, 911, .	3.4	16
5	Roll-to-roll micromolding of UV curable coatings. Journal of Coatings Technology Research, 2021, 18, 627-639.	2.5	2
6	Block Copolymer and Nanosilica-Modified Epoxy Nanocomposites. ACS Applied Polymer Materials, 2021, 3, 4156-4167.	4.4	13
7	Solution-based, additive fabrication of flush metal conductors in plastic substrates by printing and plating in two-level capillary channels. Flexible and Printed Electronics, 2021, 6, 045005.	2.7	3
8	Contact line dynamics in curtain coating of non-Newtonian liquids. Physics of Fluids, 2021, 33, .	4.0	10
9	Poly(methyl methacrylate) Films with High Concentrations of Silicon Quantum Dots for Visibly Transparent Luminescent Solar Concentrators. ACS Applied Materials & Interfaces, 2020, 12, 4572-4578.	8.0	36
10	Inkjet-printed, self-aligned organic Schottky diodes on imprinted plastic substrates. Flexible and Printed Electronics, 2020, 5, 015006.	2.7	15
11	Adhesion Strength of Block Copolymer Toughened Epoxy on Aluminum. ACS Applied Polymer Materials, 2020, 2, 464-474.	4.4	26
12	Self-Aligned Capillarity-Assisted Printing of High Aspect Ratio Flexible Metal Conductors: Optimizing Ink Flow, Plating, and Mechanical Adhesion. Industrial & Engineering Chemistry Research, 2020, 59, 22107-22122.	3.7	8
13	Cavity filling with shear-thinning liquids. Physical Review Fluids, 2020, 5, .	2.5	5
14	Near-IR sintering of conductive silver nanoparticle ink with in situ resistance measurement. Journal of Coatings Technology Research, 2019, 16, 1699-1705.	2.5	5
15	Sustainable near UV-curable acrylates based on natural phenolics for stereolithography 3D printing. Polymer Chemistry, 2019, 10, 1067-1077.	3.9	94
16	Capillary Flow with Evaporation in Open Rectangular Microchannels. Langmuir, 2019, 35, 8131-8143.	3.5	33
17	Effect of viscosity on liquid curtain stability. AICHE Journal, 2018, 64, 1448-1457.	3.6	16
18	Open-channel microfluidic diodes based on two-tier junctions. Applied Physics Letters, 2018, 113, .	3.3	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. Industrial & Engineering Chemistry Research, 2018, 57, 16335-16346.	3.7	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 Ω. Flexible and Printed Electronics, 2018, 3, 045003.	2.7	18
21	Capillary Coatings: Flow and Drying Dynamics in Open Microchannels. Langmuir, 2018, 34, 7624-7639.	3.5	26
22	Self-aligned capillarity-assisted printing of top-gate thin-film transistors on plastic. Flexible and Printed Electronics, 2018, 3, 035004.	2.7	13
23	Effect of Nanocrystal Size and Carbon on Grain Growth during Annealing of Copper Zinc Tin Sulfide Nanocrystal Coatings. Chemistry of Materials, 2017, 29, 1676-1683.	6.7	31
24	Dynamic self-assembly of charged colloidal strings and walls in simple fluid flows. Soft Matter, 2017, 13, 1681-1692.	2.7	9
25	Effect of particle size distribution on stress development and microstructure of particulate coatings. Journal of Coatings Technology Research, 2017, 14, 455-465.	2.5	8
26	Dynamics of Capillary-Driven Flow in 3D Printed Open Microchannels. Langmuir, 2017, 33, 2949-2964.	3.5	34
27	Influence of the drying conditions on the particle distribution in particle-filled polymer films: Predictive simulation of the particle distribution during drying. Journal of Composite Materials, 2017, 51, 3391-3403.	2.4	12
28	Scalable, Selfâ€Aligned Printing of Flexible Graphene Microâ€Supercapacitors. Advanced Energy Materials, 2017, 7, 1700285.	19.5	167
29	Copper–Zinc–Tin–Sulfide Thin Films via Annealing of Ultrasonic Spray Deposited Nanocrystal Coatings. ACS Applied Materials & Interfaces, 2017, 9, 18865-18871.	8.0	12
30	High-Resolution Transfer Printing of Graphene Lines for Fully Printed, Flexible Electronics. ACS Nano, 2017, 11, 7431-7439.	14.6	116
31	Modulus- and Surface-Energy-Tunable Thiol–ene for UV Micromolding of Coatings. ACS Applied Materials & Interfaces, 2017, 9, 24976-24986.	8.0	14
32	Visualization and simulation of the transfer process of indexâ€matched silica microparticle inks for gravure printing. AICHE Journal, 2017, 63, 1419-1429.	3.6	5
33	Synergistic Toughening of Epoxy Modified by Graphene and Block Copolymer Micelles. Macromolecules, 2016, 49, 9507-9520.	4.8	63
34	Printed, Selfâ€Aligned Sideâ€Gate Organic Transistors with a Subâ€5 µm Gate–Channel Distance on Imprinte Plastic Substrates. Advanced Electronic Materials, 2016, 2, 1600293.	d _{5.1}	33
35	Engineering superior toughness in commercially viable block copolymer modified epoxy resin. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 189-204.	2.1	46
36	Zeolite Membranes: Oriented MFI Membranes by Gel-Less Secondary Growth of Sub-100 nm MFI-Nanosheet Seed Layers (Adv. Mater. 21/2015). Advanced Materials, 2015, 27, 3339-3339.	21.0	0

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37	Oriented MFI Membranes by Gel‣ess Secondary Growth of Subâ€100 nm MFIâ€Nanosheet Seed Layers. Advanced Materials, 2015, 27, 3243-3249.	21.0	182
38	Stress Development in Hard Particle Coatings in the Absence of Lateral Drying. Journal of the American Ceramic Society, 2015, 98, 2214-2222.	3.8	13
39	Wettability Contrast Gravure Printing. Advanced Materials, 2015, 27, 7420-7425.	21.0	26
40	A Selfâ€Aligned Strategy for Printed Electronics: Exploiting Capillary Flow on Microstructured Plastic Surfaces. Advanced Electronic Materials, 2015, 1, 1500137.	5.1	43
41	Deformation Processes in Block Copolymer Toughened Epoxies. Macromolecules, 2015, 48, 3672-3684.	4.8	43
42	Evaluating sag resistance with a multinotched applicator: correlation with surface flow measurements and practical recommendations. Journal of Coatings Technology Research, 2015, 12, 809-817.	2.5	8
43	Sag in drying coatings: Prediction and real time measurement with particle tracking. Progress in Organic Coatings, 2015, 86, 49-58.	3.9	10
44	Formation of Copper Zinc Tin Sulfide Thin Films from Colloidal Nanocrystal Dispersions via Aerosol-Jet Printing and Compaction. ACS Applied Materials & Interfaces, 2015, 7, 11526-11535.	8.0	27
45	Water-based coatings for 3D printed parts. Journal of Coatings Technology Research, 2015, 12, 889-897.	2.5	18
46	High-Resolution, High-Aspect Ratio Conductive Wires Embedded in Plastic Substrates. ACS Applied Materials & Interfaces, 2015, 7, 1841-1847.	8.0	39
47	Screen Printing of Highly Loaded Silver Inks on Plastic Substrates Using Silicon Stencils. ACS Applied Materials & Interfaces, 2015, 7, 12619-12624.	8.0	114
48	Allâ€Printed, Foldable Organic Thinâ€Film Transistors on Glassine Paper. Advanced Materials, 2015, 27, 7058-7064.	21.0	133
49	A Raman spectroscopic method to find binder distribution in electrodes during drying. Journal of Coatings Technology Research, 2014, 11, 11-17.	2.5	71
50	Gravure Printing of Graphene for Largeâ€∎rea Flexible Electronics. Advanced Materials, 2014, 26, 4533-4538.	21.0	298
51	Microstructure and performance of block copolymer modified epoxy coatings. Progress in Organic Coatings, 2014, 77, 1145-1154.	3.9	30
52	Facile Method for Fabricating Flexible Substrates with Embedded, Printed Silver Lines. ACS Applied Materials & Interfaces, 2014, 6, 1306-1312.	8.0	21
53	Stress development and film formation in multiphase composite latexes. Journal of Coatings Technology Research, 2014, 11, 827-839.	2.5	18
54	Microstructure Evolution and Crystal Growth in Cu ₂ ZnSnS ₄ Thin Films Formed By Annealing Colloidal Nanocrystal Coatings. Chemistry of Materials, 2014, 26, 3191-3201.	6.7	66

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55	Effect of block copolymer concentration and core composition on toughening epoxies. Polymer, 2014, 55, 4172-4181.	3.8	48
56	Depthwise Viscosity Gradients in UV ured Epoxy Coatings. Macromolecular Materials and Engineering, 2013, 298, 145-152.	3.6	13
57	Solutionâ€processable exfoliated zeolite nanosheets purified by density gradient centrifugation. AICHE Journal, 2013, 59, 3458-3467.	3.6	80
58	Drying and cracking of soft latex coatings. Journal of Coatings Technology Research, 2013, 10, 441-451.	2.5	31
59	Effects of freezing and thawing on the microstructure of latex paints. Journal of Colloid and Interface Science, 2013, 392, 183-193.	9.4	3
60	Optimization of Aerosol Jet Printing for High-Resolution, High-Aspect Ratio Silver Lines. ACS Applied Materials & Interfaces, 2013, 5, 4856-4864.	8.0	296
61	Role of Localized Network Damage in Block Copolymer Toughened Epoxies. ACS Macro Letters, 2012, 1, 338-342.	4.8	57
62	Radicalâ€cured block copolymerâ€modified thermosets. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 540-550.	2.1	8
63	Modeling the Depthwise Gradient in Curing and Skin Formation in Wrinkling Coatings. Industrial & amp; Engineering Chemistry Research, 2007, 46, 3358-3365.	3.7	2
64	Silica nanoparticle dispersions in homopolymer versus block copolymer. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 2284-2299.	2.1	78
65	Calcium Carbonate Formation on Cross-Linked Polyethylene (PEX) and Polypropylene Random Copolymer (PP-r). Journal of Solar Energy Engineering, Transactions of the ASME, 2006, 128, 251-254.	1.8	11
66	Apatite Converted from 3-D Ordered Macroporous Sol-Gel Bioactive Glass (3DOM-BG) Particles. Journal of the American Ceramic Society, 2005, 88, 587-592.	3.8	11
67	Mechanical properties of polymer-ceramic nanocomposite coatings by depth-sensing indentation. Polymer Engineering and Science, 2005, 45, 207-216.	3.1	14
68	Stress development in drying fibers and spheres. Journal of Applied Polymer Science, 2003, 90, 3934-3944.	2.6	7
69	Electrical and optical properties of ceramic-polymer nanocomposite coatings. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 1744-1761.	2.1	58
70	Effect of lamp cycling on conversion and stress development in ultraviolet-cured acrylate coatings. Journal of Applied Polymer Science, 2002, 84, 2784-2793.	2.6	28
71	Porous Composites for Adhering Artificial Cartilage to Bone. Materials Research Society Symposia Proceedings, 2001, 711, 1.	0.1	1
72	Electrical and mechanical behavior of carbon black-filled poly(vinyl acetate) latex-based composites. Polymer Engineering and Science, 2001, 41, 1947-1962.	3.1	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.	2.6	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.	2.6	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.	2.6	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.	2.6	34
84	Alumina/Epoxy Interpenetrating Phase Composite Coatings: I, Processing and Microstructural Development. Journal of the American Ceramic Society, 1998, 81, 3109-3116.	3.8	6
85	Indentation measurements using a dynamic mechanical analyzer. Polymer Engineering and Science, 1998, 38, 1529-1535.	3.1	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.	1.3	54
88	Macroporous ceramics from ceramic-polymer dispersion methods. AICHE Journal, 1997, 43, 2878-2888.	3.6	22
89	The effects of processing variables on stress development in ultraviolet-cured coatings. Journal of Applied Polymer Science, 1997, 66, 1267-1277.	2.6	41
90	Predicting drying in coatings that react and gel: Drying regime maps. AICHE Journal, 1996, 42, 55-67.	3.6	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.	3.8	94
92	Measurement of Porosity in Ceramic Coatings by Thermogravimetric Volatilization of Liquids. Journal of the American Ceramic Society, 1996, 79, 3317-3320.	3.8	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