

Philip Scharfer

List of Publications by Year in descending order

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Version: 2024-02-01

54
papers

1,195
citations

361413

20
h-index

395702

33
g-index

54
all docs

54
docs citations

54
times ranked

1295
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly efficient polymer solar cells cast from non-halogenated xylene/anisaldehyde solution. <i>Energy and Environmental Science</i> , 2015, 8, 2744-2752.	30.8	139
2	Slot die coating of lithium-ion battery electrodes: investigations on edge effect issues for stripe and pattern coatings. <i>Journal of Coatings Technology Research</i> , 2014, 11, 57-63.	2.5	97
3	Drying of Lithium-ion Battery Anodes for Use in High-Energy Cells: Influence of Electrode Thickness on Drying Time, Adhesion, and Crack Formation. <i>Energy Technology</i> , 2019, 7, 1900722.	3.8	79
4	Experimental investigation into battery electrode surfaces: The distribution of liquid at the surface and the emptying of pores during drying. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 22-31.	9.4	54
5	Development of a three-stage drying profile based on characteristic drying stages for lithium-ion battery anodes. <i>Drying Technology</i> , 2017, 35, 1266-1275.	3.1	51
6	An experimental and analytical study on intermittent slot die coating of viscoelastic battery slurries. <i>Journal of Coatings Technology Research</i> , 2015, 12, 927-938.	2.5	49
7	Sorption and diffusion measurements in ternary polymer-solvent-solvent systems by means of a magnetic suspension balance-Experimental methods and correlations with a modified Flory-Huggins and free-volume theory. <i>Chemical Engineering Science</i> , 2007, 62, 2254-2266.	3.8	47
8	Mass transport measurements in membranes by means of in situ Raman spectroscopy-First results of methanol and water profiles in fuel cell membranes. <i>Journal of Membrane Science</i> , 2007, 303, 37-42.	8.2	46
9	Drying Dynamics of Solution-Processed Perovskite Thin-Film Photovoltaics: In Situ Characterization, Modeling, and Process Control. <i>Advanced Energy Materials</i> , 2019, 9, 1901581.	19.5	42
10	Impact of drying conditions and wet film properties on adhesion and film solidification of lithium-ion battery anodes. <i>Drying Technology</i> , 2017, 35, 1807-1817.	3.1	39
11	Water sorption in poly(vinyl alcohol) membranes: An experimental and numerical study of solvent diffusion in a crosslinked polymer. <i>Chemical Engineering and Processing: Process Intensification</i> , 2011, 50, 543-550.	3.6	34
12	Determination of Concentration-Dependent Diffusion Coefficients in Polymer-Solvent Systems: Analysis of Concentration Profiles Measured by Raman Spectroscopy during Single Drying Experiments Excluding Boundary Conditions and Phase Equilibrium. <i>Macromolecules</i> , 2015, 48, 8608-8614.	4.8	34
13	Structure Formation in Low-Bandgap Polymer:Fullerene Solar Cell Blends in the Course of Solvent Evaporation. <i>Macromolecules</i> , 2012, 45, 7948-7955.	4.8	28
14	From Micro to Nano Thin Polymer Layers: Thickness and Concentration Dependence of Sorption and the Solvent Diffusion Coefficient. <i>Macromolecules</i> , 2015, 48, 8285-8293.	4.8	27
15	Comparative Study of Printed Multilayer OLED Fabrication through Slot Die Coating, Gravure and Inkjet Printing, and Their Combination. <i>Colloids and Interfaces</i> , 2019, 3, 32.	2.1	27
16	Slot Die Coated and Flexo Printed Highly Efficient SMOLEDs. <i>Advanced Materials Technologies</i> , 2017, 2, 1600230.	5.8	23
17	Drying of NCM Cathode Electrodes with Porous, Nanostructured Particles Versus Compact Solid Particles: Comparative Study of Binder Migration as a Function of Drying Conditions. <i>Energy Technology</i> , 2022, 10, .	3.8	23
18	Analytical determination of process windows for bilayer slot die coating. <i>Journal of Coatings Technology Research</i> , 2015, 12, 877-887.	2.5	22

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19	Gaining Further Insight into the Solvent Additive-Driven Crystallization of Bulk-Heterojunction Solar Cells by <i>in Situ</i> X-ray Scattering and Optical Reflectometry. <i>Macromolecules</i> , 2016, 49, 4867-4874.	4.8	22
20	Moisture Adsorption Behavior in Anodes for Li-ion Batteries. <i>Energy Technology</i> , 2020, 8, 1801162.	3.8	22
21	Edge Formation in High-Speed Intermittent Slot Die Coating of Disruptively Stacked Thick Battery Electrodes. <i>Energy Technology</i> , 2020, 8, 1900137.	3.8	17
22	Reduced Drying Time of Anodes for Lithium-ion Batteries through Simultaneous Multilayer Coating. <i>Energy Technology</i> , 2021, 9, 2100367.	3.8	17
23	Multilayer OLEDs with four slot die-coated layers. <i>Journal of Coatings Technology Research</i> , 2019, 16, 1643-1652.	2.5	16
24	Investigation of Drying Curves of Lithium-ion Battery Electrodes with a New Gravimetric Double-Side Batch Dryer Concept Including Setup Characterization and Model Simulations. <i>Energy Technology</i> , 2021, 9, 2000889.	3.8	16
25	High-Speed Coating of Primer Layer for Li-ion Battery Electrodes by Using Slot Die Coating. <i>Energy Technology</i> , 2020, 8, 2000259.	3.8	15
26	Investigation of edge formation during the coating process of Li-ion battery electrodes. <i>Journal of Coatings Technology Research</i> , 2022, 19, 121-130.	2.5	15
27	Slot die stripe coating of low viscous fluids. <i>Journal of Coatings Technology Research</i> , 2018, 15, 899-911.	2.5	14
28	Liquid film coating of small molecule OLEDs. <i>Journal of Coatings Technology Research</i> , 2014, 11, 75-81.	2.5	13
29	Formation of blade and slot die coated small molecule multilayers for OLED applications studied theoretically and by XPS depth profiling. <i>AIP Advances</i> , 2016, 6, .	1.3	12
30	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.	2.4	12
31	Investigation of the flow field in thin polymer films due to inhomogeneous drying. <i>Journal of Coatings Technology Research</i> , 2015, 12, 921-926.	2.5	11
32	Hysteresis Behavior in the Sorption Equilibrium of Water in Anodes for Li-Ion Batteries. <i>Langmuir</i> , 2020, 36, 6193-6201.	3.5	11
33	Prediction of diffusion in a ternary solvent-polymer blend by means of binary diffusion data: Comparison of experimental data and simulative results. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	2.6	10
34	Investigation of interfacial instabilities with a two-layer slide coating process. <i>Journal of Coatings Technology Research</i> , 2017, 14, 991-1001.	2.5	10
35	Diffusion kinetics of water in graphite anodes for Li-ion batteries. <i>Drying Technology</i> , 2022, 40, 1130-1145.	3.1	10
36	Local heat transfer characteristics of a slot nozzle array for batch drying of thin films under industrial process conditions. <i>Journal of Coatings Technology Research</i> , 2015, 12, 915-920.	2.5	9

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37	Activity determination of FAD-dependent glucose dehydrogenase immobilized in PEDOT:PSS/PVA composite films for biosensor applications. <i>Engineering in Life Sciences</i> , 2016, 16, 577-585.	3.6	9
38	Correlative In Situ Multichannel Imaging for Large-Area Monitoring of Morphology Formation in Solution-Processed Perovskite Layers. <i>Solar Rrl</i> , 2022, 6, 2100353.	5.8	9
39	Influence of Particle Shape on the Drying Regime Maps for Plate-like Particle-Polymer Composites. <i>Langmuir</i> , 2020, 36, 6245-6253.	3.5	8
40	Slot die-coated blue SMOLED multilayers. <i>Journal of Coatings Technology Research</i> , 2017, 14, 1029-1037.	2.5	7
41	Influence of Layer Thickness on the Drying of Lithium-Ion Battery Electrodes—Simulation and Experimental Validation. <i>Energy Technology</i> , 2021, 9, 2100013.	3.8	7
42	Investigation of the flow structure in thin polymer films using 3D μ PTV enhanced by GPU. <i>Experiments in Fluids</i> , 2018, 59, 1.	2.4	6
43	Different dominating mass transport mechanisms for drying and sorption of toluene-PMMA films – Visualized with Raman spectroscopy. <i>Polymer</i> , 2021, 222, 123640.	3.8	6
44	Drying Kinetics from Micrometer- to Nanometer-Scale Polymer Films: A Study on Solvent Diffusion, Polymer Relaxation, and Substrate Interaction Effects. <i>Langmuir</i> , 2021, 37, 6022-6031.	3.5	6
45	Modeling of interdiffusion in poly(vinyl acetate)-poly(methyl methacrylate)-toluene multicomponent systems. <i>Journal of Applied Polymer Science</i> , 2019, 136, 47092.	2.6	5
46	Determination of Binary Interaction Parameters for Ternary Polymer-Polymer-Solvent Systems Using Raman Spectroscopy. <i>Advanced Materials Technologies</i> , 2021, 6, 2000149.	5.8	4
47	Critical Solutal Marangoni Number Correlation for Short-Scale Convective Instabilities in Drying Poly(vinyl acetate)-Methanol Thin Films. <i>Polymers</i> , 2021, 13, 2955.	4.5	4
48	Drying kinetic measurements of polymer nanolayers – Experimental results with a model-based validation and interpretation of solvent diffusion. <i>Polymer</i> , 2020, 200, 122595.	3.8	4
49	Calibration Routine for Quantitative Three-Dimensional Flow Field Measurements in Drying Polymer Solutions Subject to Marangoni Convection. <i>Colloids and Interfaces</i> , 2019, 3, 39.	2.1	3
50	Process-dependent conductivity and film homogeneity of slot-die-coated PEDOT:PSS/PVA composite films. <i>Journal of Coatings Technology Research</i> , 2017, 14, 1039-1051.	2.5	2
51	Measurements and predictive modeling of water diffusion coefficients in bovine serum albumin/polymer blends for biosensors. <i>Journal of Applied Polymer Science</i> , 2017, 134, 45368.	2.6	1
52	Transient Three-Dimensional Flow Field Measurements by Means of 3D μ PTV in Drying Poly(Vinyl) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50	4.5	1
53	On the drying kinetics of non-spherical particle-filled polymer films: A numerical study. <i>AIChE Journal</i> , 0, , e17398.	3.6	0
54	Spatially resolved monitoring and modelling of the formation dynamics in hybrid perovskite solution thin-films for large-scale morphology control. , 0, , .		0