

David J Scurr

List of Publications by Year in descending order

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107
papers

2,909
citations

185998

28
h-index

205818

48
g-index

114
all docs

114
docs citations

114
times ranked

4749
citing authors

#	ARTICLE	IF	CITATIONS
1	All-natural composite wound dressing films of essential oils encapsulated in sodium alginate with antimicrobial properties. <i>International Journal of Pharmaceutics</i> , 2014, 463, 137-145.	2.6	241
2	High loading efficiency and sustained release of siRNA encapsulated in PLGA nanoparticles: Quality by design optimization and characterization. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2011, 77, 26-35.	2.0	191
3	Biomaterial modification of urinary catheters with antimicrobials to give long-term broadspectrum antibiofilm activity. <i>Journal of Controlled Release</i> , 2015, 202, 57-64.	4.8	130
4	Intradermal and transdermal drug delivery using microneedles – Fabrication, performance evaluation and application to lymphatic delivery. <i>Advanced Drug Delivery Reviews</i> , 2020, 153, 195-215.	6.6	102
5	Injectable and porous PLGA microspheres that form highly porous scaffolds at body temperature. <i>Acta Biomaterialia</i> , 2014, 10, 5090-5098.	4.1	94
6	Immune Modulation by Design: Using Topography to Control Human Monocyte Attachment and Macrophage Differentiation. <i>Advanced Science</i> , 2020, 7, 1903392.	5.6	93
7	Controlling the Physical Dimensions of Peptide Nanotubes by Supramolecular Polymer Coassembly. <i>ACS Nano</i> , 2016, 10, 7436-7442.	7.3	91
8	Expanding the applications of microneedles in dermatology. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2019, 140, 121-140.	2.0	69
9	Investigation of the mechanism of plasma electrolytic oxidation of aluminium using 18O tracer. <i>Corrosion Science</i> , 2010, 52, 1070-1076.	3.0	68
10	Dimerization of Tri(4-bromophenyl)benzene by Aryl-Aryl Coupling from Solution on a Gold Surface. <i>Journal of the American Chemical Society</i> , 2011, 133, 4220-4223.	6.6	63
11	Enzyme-Activated RGD Ligands on Functionalized Poly(ethylene glycol) Monolayers: Surface Analysis and Cellular Response. <i>Langmuir</i> , 2009, 25, 7533-7539.	1.6	59
12	Chemical and spatial analysis of protein loaded PLGA microspheres for drug delivery applications. <i>Journal of Controlled Release</i> , 2012, 162, 321-329.	4.8	56
13	Measuring Compositions in Organic Depth Profiling: Results from a VAMAS Interlaboratory Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 10784-10797.	1.2	56
14	3D ToF-SIMS Imaging of Polymer Multilayer Films Using Argon Cluster Sputter Depth Profiling. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 2654-2659.	4.0	54
15	ToF-SIMS analysis of chemical heterogenities in inkjet micro-array printed drug/polymer formulations. <i>Journal of Materials Science: Materials in Medicine</i> , 2012, 23, 385-391.	1.7	44
16	Ambient DESI and LESA-MS Analysis of Proteins Adsorbed to a Biomaterial Surface Using In-Situ Surface Tryptic Digestion. <i>Journal of the American Society for Mass Spectrometry</i> , 2013, 24, 1927-1936.	1.2	40
17	Protein identification by 3D OrbiSIMS to facilitate in situ imaging and depth profiling. <i>Nature Communications</i> , 2020, 11, 5832.	5.8	40
18	Surface Characterization of Carbohydrate Microarrays. <i>Langmuir</i> , 2010, 26, 17143-17155.	1.6	39

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19	The Evolution of Pd [*] -Sn Catalytic Surfaces in Electroless Copper Deposition. <i>Journal of the Electrochemical Society</i> , 2011, 158, D172.	1.3	38
20	High throughput screening for biomaterials discovery. <i>Journal of Controlled Release</i> , 2014, 190, 115-126.	4.8	38
21	Cryo-OrbiSIMS for 3D Molecular Imaging of a Bacterial Biofilm in Its Native State. <i>Analytical Chemistry</i> , 2020, 92, 9008-9015.	3.2	37
22	Influence of the Plasma Sheath on Plasma Polymer Deposition in Advance of a Mask and down Pores. <i>Journal of Physical Chemistry B</i> , 2009, 113, 8487-8494.	1.2	36
23	Characterisation of amino acid modified cellulose surfaces using ToF-SIMS and XPS. <i>Cellulose</i> , 2010, 17, 747-756.	2.4	35
24	Insight into imiquimod skin permeation and increased delivery using microneedle pre-treatment. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2019, 139, 33-43.	2.0	34
25	Distribution and Visualisation of Chlorhexidine Within the Skin Using ToF-SIMS: A Potential Platform for the Design of More Efficacious Skin Antiseptic Formulations. <i>Pharmaceutical Research</i> , 2013, 30, 1896-1905.	1.7	32
26	A Multifaceted Ferrocene Interlayer for Highly Stable and Efficient Lithium Doped Spiro-OMeTAD-based Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	32
27	Controlling cell morphology on amino acid-modified cellulose. <i>Soft Matter</i> , 2008, 4, 1059.	1.2	31
28	Enhanced vitamin C skin permeation from supramolecular hydrogels, illustrated using in situ ToF-SIMS 3D chemical profiling. <i>International Journal of Pharmaceutics</i> , 2019, 563, 21-29.	2.6	31
29	Age-Related Changes to Human Stratum Corneum Lipids Detected Using Time-of-Flight Secondary Ion Mass Spectrometry Following in Vivo Sampling. <i>Analytical Chemistry</i> , 2016, 88, 4400-4408.	3.2	30
30	Intradermal delivery of imiquimod using polymeric microneedles for basal cell carcinoma. <i>International Journal of Pharmaceutics</i> , 2020, 589, 119808.	2.6	29
31	Surface Characteristics of Spray-Dried Microspheres Consisting of PLGA and PVP: Relating the Influence of Heat and Humidity to the Thermal Characteristics of These Polymers. <i>Molecular Pharmaceutics</i> , 2013, 10, 3213-3224.	2.3	28
32	The Influence of Spray-Drying Parameters on Phase Behavior, Drug Distribution, and In Vitro Release of Injectable Microspheres for Sustained Release. <i>Journal of Pharmaceutical Sciences</i> , 2015, 104, 1451-1460.	1.6	27
33	Multivariate ToF-SIMS image analysis of polymer microarrays and protein adsorption. <i>Biointerphases</i> , 2015, 10, 019005.	0.6	27
34	Multivariate analysis of 3D ToF-SIMS images: method validation and application to cultured neuronal networks. <i>Analyst</i> , 2016, 141, 90-95.	1.7	25
35	Intradermal Delivery of an Immunomodulator for Basal Cell Carcinoma; Expanding the Mechanistic Insight into Solid Microneedle-Enhanced Delivery of Hydrophobic Molecules. <i>Molecular Pharmaceutics</i> , 2020, 17, 2925-2937.	2.3	25
36	A dual-application poly (DL-lactic-co-glycolic) acid (PLGA)-chitosan composite scaffold for potential use in bone tissue engineering. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2017, 28, 1966-1983.	1.9	23

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37	The effect of the dispersion of microfibrillated cellulose on the mechanical properties of melt-compounded polypropylene-polyethylene copolymer. <i>Cellulose</i> , 2019, 26, 9645-9659.	2.4	22
38	The use of nanovibration to discover specific and potent bioactive metabolites that stimulate osteogenic differentiation in mesenchymal stem cells. <i>Science Advances</i> , 2021, 7, .	4.7	22
39	Polymer Microarrays for High Throughput Discovery of Biomaterials. <i>Journal of Visualized Experiments</i> , 2012, , e3636.	0.2	21
40	Phosphatase responsive peptide surfaces. <i>Journal of Materials Chemistry</i> , 2012, 22, 12229.	6.7	21
41	Structural and optical properties of dilute InAsN grown by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	20
42	Nanoscale Surface Characterization and Miscibility Study of a Spray-Dried Injectable Polymeric Matrix Consisting of Poly(lactic-co-glycolic acid) and Polyvinylpyrrolidone. <i>Journal of Pharmaceutical Sciences</i> , 2012, 101, 3473-3485.	1.6	20
43	Surface modification of PdlLGA microspheres with gelatine methacrylate: Evaluation of adsorption, entrapment, and oxygen plasma treatment approaches. <i>Acta Biomaterialia</i> , 2017, 53, 450-459.	4.1	20
44	Quantification and Qualitative Effects of Different PEGylations on Poly(butyl cyanoacrylate) Nanoparticles. <i>Molecular Pharmaceutics</i> , 2017, 14, 2560-2569.	2.3	20
45	Direct Immobilization of Engineered Nanobodies on Gold Sensors. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 17353-17360.	4.0	20
46	Elucidating the molecular landscape of the stratum corneum. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2114380119.	3.3	20
47	Rapid micropatterning of cell lines and human pluripotent stem cells on elastomeric membranes. <i>Biotechnology and Bioengineering</i> , 2012, 109, 2630-2641.	1.7	19
48	High throughput discovery of thermo-responsive materials using water contact angle measurements and time-of-flight secondary ion mass spectrometry. <i>Surface and Interface Analysis</i> , 2013, 45, 181-184.	0.8	19
49	Spectroscopic Studies of Internal Injector Deposits (IDID) Resulting from the Use of Non-Commercial Low Molecular Weight Polyisobutylenesuccinimide (PIBSI). <i>SAE International Journal of Fuels and Lubricants</i> , 0, 7, 762-770.	0.2	19
50	Tailoring the Electrochemical Properties of Carbon Nanotube Modified Indium Tin Oxide via <i>in Situ</i> Grafting of Aryl Diazonium. <i>Langmuir</i> , 2017, 33, 4924-4933.	1.6	19
51	The role of residual stress in the fracture properties of a natural ceramic. <i>Journal of Materials Chemistry</i> , 2005, 15, 947.	6.7	18
52	Use of imaging multivariate analysis to improve biochemical and anatomical discrimination in desorption electrospray ionisation mass spectrometry imaging. <i>Analyst</i> , The, 2012, 137, 3946.	1.7	18
53	A Novel Technique for Investigating the Characteristics and History of Deposits Formed Within High Pressure Fuel Injection Equipment. <i>SAE International Journal of Fuels and Lubricants</i> , 0, 5, 1155-1164.	0.2	18
54	Analysis and prediction of defects in UV photo-initiated polymer microarrays. <i>Journal of Materials Chemistry B</i> , 2013, 1, 1035-1043.	2.9	18

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55	ToF-SIMS analysis of a polymer microarray composed of poly(meth)acrylates with C ₆ derivative pendant groups. <i>Surface and Interface Analysis</i> , 2016, 48, 226-236.	0.8	18
56	Dendrimer pre-treatment enhances the skin permeation of chlorhexidine digluconate: Characterisation by in vitro percutaneous absorption studies and Time-of-Flight Secondary Ion Mass Spectrometry. <i>European Journal of Pharmaceutical Sciences</i> , 2017, 104, 90-101.	1.9	18
57	ToF-SIMS imaging of a polymer microarray prepared using inkjet printing of acrylate monomers. <i>Surface and Interface Analysis</i> , 2013, 45, 202-205.	0.8	17
58	Development and Validation of a Fluorescence Method to Follow the Build-up of Short Peptide Sequences on Solid 2D Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 53-58.	4.0	16
59	Controlling the Release of Indomethacin from Glass Solutions Layered with a Rate Controlling Membrane Using Fluid-Bed Processing. Part 1: Surface and Cross-Sectional Chemical Analysis. <i>Molecular Pharmaceutics</i> , 2017, 14, 959-973.	2.3	16
60	Efficacy of antimicrobial and anti-viral coated air filters to prevent the spread of airborne pathogens. <i>Scientific Reports</i> , 2022, 12, 2803.	1.6	16
61	Strategies for MCR image analysis of large hyperspectral datasets. <i>Surface and Interface Analysis</i> , 2013, 45, 466-470.	0.8	15
62	Imaging of Crystalline and Amorphous Surface Regions Using Time-of-Flight Secondary-Ion Mass Spectrometry (ToF-SIMS): Application to Pharmaceutical Materials. <i>Analytical Chemistry</i> , 2016, 88, 3481-3487.	3.2	15
63	Mechanisms of lipid preservation in archaeological clay ceramics revealed by mass spectrometry imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 14688-14693.	3.3	15
64	Recent Advances in the Analysis of GDI and Diesel Fuel Injector Deposits. <i>Fuel</i> , 2020, 272, 117682.	3.4	15
65	Information on the Aromatic Structure of Internal Diesel Injector Deposits From Time of Flight Secondary Ion Mass Spectrometry (ToF-SIMS). , 2014, , .		14
66	Residual polymer stabiliser causes anisotropic electrical conductivity during inkjet printing of metal nanoparticles. <i>Communications Materials</i> , 2021, 2, .	2.9	14
67	Sequential Orbitrap Secondary Ion Mass Spectrometry and Liquid Extraction Surface Analysis-Tandem Mass Spectrometry-Based Metabolomics for Prediction of Brain Tumor Relapse from Sample-Limited Primary Tissue Archives. <i>Analytical Chemistry</i> , 2021, 93, 6947-6954.	3.2	13
68	Rapid Nanogram Scale Screening Method of Microarrays to Evaluate Drug-Polymer Blends Using High-Throughput Printing Technology. <i>Molecular Pharmaceutics</i> , 2017, 14, 2079-2087.	2.3	12
69	Single-Cell Metabolic Profiling of Macrophages Using 3D OrbiSIMS: Correlations with Phenotype. <i>Analytical Chemistry</i> , 2022, 94, 9389-9398.	3.2	12
70	Combination of (M)DSC and Surface Analysis to Study the Phase Behaviour and Drug Distribution of Ternary Solid Dispersions. <i>Pharmaceutical Research</i> , 2015, 32, 1407-1416.	1.7	11
71	3D chemical characterization of frozen hydrated hydrogels using ToF-SIMS with argon cluster sputter depth profiling. <i>Biointerphases</i> , 2016, 11, 02A301.	0.6	11
72	A Material Conferring Hemocompatibility. <i>Scientific Reports</i> , 2016, 6, 26848.	1.6	11

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73	Sample rotation improves gas cluster sputter depth profiling of polymers. <i>Surface and Interface Analysis</i> , 2017, 49, 953-959.	0.8	11
74	Reversible, High-Affinity Surface Capturing of Proteins Directed by Supramolecular Assembly. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 8937-8944.	4.0	11
75	Dendrimer-mediated permeation enhancement of chlorhexidine digluconate: Determination of in vitro skin permeability and visualisation of dermal distribution. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2021, 159, 77-87.	2.0	11
76	Analysis of local deformation in indented <i>Ensis Siliqua</i> mollusk shells using Raman spectroscopy. <i>Journal of Materials Research</i> , 2006, 21, 3099-3108.	1.2	10
77	Influence of formulation composition and process on the characteristics and in vitro release from PLGA-based sustained release injectables. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2015, 90, 22-29.	2.0	10
78	Directly bonding antimicrobial peptide mimics to steel and the real world applications of these materials. <i>Materials Science and Engineering C</i> , 2019, 102, 299-304.	3.8	10
79	Distribution of a highly lipophilic drug cannabidiol into different lymph nodes following oral administration in lipidic vehicle. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2022, 174, 29-34.	2.0	10
80	Physicomechanical properties of sintered scaffolds formed from porous and protein-loaded poly(DL-lactic-co-glycolic acid) microspheres for potential use in bone tissue engineering. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2015, 26, 796-811.	1.9	9
81	Characterisation of mechanical insertion of commercial microneedles. <i>Journal of Drug Delivery Science and Technology</i> , 2020, 58, 101766.	1.4	9
82	Spatially Resolved Molecular Compositions of Insoluble Multilayer Deposits Responsible for Increased Pollution from Internal Combustion Engines. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 51026-51035.	4.0	9
83	Fumed Silica Nanoparticle Mediated Biomimicry for Optimal Cell-Material Interactions for Artificial Organ Development. <i>Macromolecular Bioscience</i> , 2014, 14, 307-313.	2.1	8
84	The Application of New Approaches to the Analysis of Deposits from the Jet Fuel Thermal Oxidation Tester (JFTOT). <i>SAE International Journal of Fuels and Lubricants</i> , 0, 10, .	0.2	8
85	Full-Thickness Characterization of Plasma Polymerized Hexane Films Irradiated by an Electron Beam. <i>Plasma Processes and Polymers</i> , 2012, 9, 22-27.	1.6	7
86	Properties of An Oral Nanoformulation of A Molecularly Dispersed Amphotericin B Comprising A Composite Matrix of Theobroma Oil and Bee's Wax. <i>Nanomaterials</i> , 2014, 4, 905-916.	1.9	7
87	Thermally Switchable Polymers Achieve Controlled <i>Escherichia coli</i> Detachment. <i>Advanced Healthcare Materials</i> , 2014, 3, 1020-1025.	3.9	7
88	On the suitability of high vacuum electrospray deposition for the fabrication of molecular electronic devices. <i>Chemical Physics Letters</i> , 2017, 682, 15-19.	1.2	7
89	Protein Encapsulation of Experimental Anticancer Agents 5F 203 and Phortress: Towards Precision Drug Delivery. <i>International Journal of Nanomedicine</i> , 2019, Volume 14, 9525-9534.	3.3	7
90	The physicochemical fingerprint of <i>Necator americanus</i> . <i>PLoS Neglected Tropical Diseases</i> , 2017, 11, e0005971.	1.3	6

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91	Molecular Formula Prediction for Chemical Filtering of 3D OrbiSIMS Datasets. <i>Analytical Chemistry</i> , 2022, 94, 4703-4711.	3.2	6
92	In vivo evaluation of different formulation strategies for sustained release injectables of a poorly soluble HIV protease inhibitor. <i>Journal of Controlled Release</i> , 2015, 199, 1-9.	4.8	5
93	The chemical and ultra-structural analysis of thin plastic films used for surgical attenuation of portosystemic shunts in dogs and cats. <i>Research in Veterinary Science</i> , 2019, 126, 192-198.	0.9	5
94	Effect of Excipients on Salt Disproportionation during Dissolution: A Novel Application of In Situ Raman Imaging. <i>Molecular Pharmaceutics</i> , 2021, 18, 3247-3259.	2.3	5
95	Imaging mass spectrometry of fingerprints on brass bullet casings using sample rotation. <i>Analyst</i> , The, 2021, 146, 7563-7572.	1.7	5
96	The characterisation of residual strain in Ensis siliqua shells. <i>Journal of Bionic Engineering</i> , 2006, 3, 33-38.	2.7	4
97	Investigations of Diesel Injector Deposits Characterization and Testing. , 0, , .		3
98	Detection of Label-Free Drugs within Brain Tissue Using Orbitrap Secondary Ion Mass Spectrometry as a Complement to Neuro-Oncological Drug Delivery. <i>Pharmaceutics</i> , 2022, 14, 571.	2.0	3
99	A new particle mounting method for surface analysis. <i>Surface and Interface Analysis</i> , 0, , .	0.8	2
100	Developing Novel Biointerfaces: Using Chlorhexidine Surface Attachment as a Method for Creating Anti-Fungal Surfaces. <i>Global Challenges</i> , 0, , 2100138.	1.8	2
101	Microneedle-Mediated Permeation Enhancement of Chlorhexidine Digluconate: Mechanistic Insights Through Imaging Mass Spectrometry. <i>Pharmaceutical Research</i> , 2022, 39, 1945-1958.	1.7	2
102	Controlling Interfacial Interpenetration of Polymer Waveguide Deposited on Plasma Treated Flexible Substrate. , 2008, , .		1
103	Fracture of Ensis siliqua mollusk shell reveals multiple delaminations as a potential defence and toughening mechanism. <i>Journal of Materials Science</i> , 2011, 46, 4719-4722.	1.7	1
104	The Effect of Temperature on the Molecular Compositions of External and Internal Gasoline Direct Injection Deposits. , 0, , .		1
105	Quantifiable correlation of ToF-SIMS and XPS data from polymer surfaces with controlled amino acid and peptide content. <i>Surface and Interface Analysis</i> , 0, , .	0.8	1
106	Structure/Property Relationships of Seashells. <i>Materials Research Society Symposia Proceedings</i> , 2004, 844, 1.	0.1	0
107	Assessing Lymphatic Uptake of Lipids Using Magnetic Resonance Imaging: A Feasibility Study in Healthy Human Volunteers with Potential Application for Tracking Lymph Node Delivery of Drugs and Formulation Excipients. <i>Pharmaceutics</i> , 2021, 13, 1343.	2.0	0