Chris Abell

List of Publications by Year
in descending order

111 papers	7,653 citations	81839 39 h-index	54882 84 g-index
126 all docs	126 docs citations	126 times ranked	11379 citing authors

#	Article	IF	Citations
1	Microdroplets in Microfluidics: An Evolving Platform for Discoveries in Chemistry and Biology. Angewandte Chemie - International Edition, 2010, 49, 5846-5868.	7.2	903
2	Small molecules, big targets: drug discovery faces the proteinâ€“protein interaction challenge. Nature Reviews Drug Discovery, 2016, 15, 533-550.	21.5	806
3	High-throughput crystallography for lead discovery in drug design. Nature Reviews Drug Discovery, 2002, 1, 45-54.	21.5	490
4	One-Step Fabrication of Supramolecular Microcapsules from Microfluidic Droplets. Science, 2012, 335, 690-694.	6.0	416
5	Fragment-Based Approaches in Drug Discovery and Chemical Biology. Biochemistry, 2012, 51, 4990-5003.	1.2	370
6	Tough Supramolecular Polymer Networks with Extreme Stretchability and Fast Roomâ€Temperature Selfâ€Healing. Advanced Materials, 2017, 29, 1605325.	11.1	347
7	Biomimetic Supramolecular Polymer Networks Exhibiting both Toughness and Selfâ€Recovery. Advanced Materials, 2017, 29, 1604951.	11.1	185
8	Cucurbit[<i>n</i>]uril-Based Microcapsules Self-Assembled within Microfluidic Droplets: A Versatile Approach for Supramolecular Architectures and Materials. Accounts of Chemical Research, 2017, 50, 208-217.	7.6	181
9	Direct and sensitive detection of a human virus by rupture event scanning. Nature Biotechnology, 2001, 19, 833-837.	9.4	178
10	Hierarchical Self-Assembly of Cellulose Nanocrystals in a Confined Geometry. ACS Nano, 2016, 10, 8443-8449.	7.3	161
11	Probing Hot Spots at Proteinâˆ'Ligand Binding Sites:â€‰ A Fragment-Based Approach Using Biophysical Methods. Journal of Medicinal Chemistry, 2006, 49, 4992-5000.	2.9	140
12	Evolution of enzyme catalysts caged in biomimetic gel-shell beads. Nature Chemistry, 2014, 6, 791-796.	6.6	140
13	Application of Fragment Growing and Fragment Linking to the Discovery of Inhibitors of <i>Mycobacterium tuberculosis</i> Pantothenate Synthetase. Angewandte Chemie - International Edition, 2009, 48, 8452-8456.	7.2	138
14	Pathway-Selective Sensitization of Mycobacterium tuberculosis for Target-Based Whole-Cell Screening. Chemistry and Biology, 2012, 19, 844-854.	6.2	123
15	A three-stage biophysical screening cascade for fragment-based drug discovery. Nature Protocols, 2013, 8, 2309-2324.	5.5	121
16	Using a Fragmentâ€Based Approach To Target Proteinâ€“Protein Interactions. ChemBioChem, 2013, 14, 332-342.	1.3	115
17	Bioinspired supramolecular fibers drawn from a multiphase self-assembled hydrogel. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8163-8168.	3.3	111
18	Droplet microfluidics for the highly controlled synthesis of branched gold nanoparticles. Scientific Reports, 2018, 8, 2440.	1.6	108

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19	Interfacial assembly of dendritic microcapsules with hostâ€“guest chemistry. Nature Communications, 2014, 5, 5772.	5.8	101
20	Integrated biophysical approach to fragment screening and validation for fragment-based lead discovery. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12984-12989.	3.3	97
21	AFM Study on Protein Immobilization on Charged Surfaces at the Nanoscale:â€‰ Toward the Fabrication of Three-Dimensional Protein Nanostructures. Langmuir, 2003, 19, 10557-10562.	1.6	84
22	Drugging challenging targets using fragment-based approaches. Current Opinion in Chemical Biology, 2010, 14, 299-307.	2.8	82
23	Validating Fragment-Based Drug Discovery for Biological RNAs: Lead Fragments Bind and Remodel the TPP Riboswitch Specifically. Chemistry and Biology, 2014, 21, 591-595.	6.2	79
24	Supramolecular hydrogel microcapsules via cucurbit[8]uril hostâ€“guest interactions with triggered and UV-controlled molecular permeability. Chemical Science, 2015, 6, 4929-4933.	3.7	77
25	Use of Atomic Force Microscopy for Making Addresses in DNA Coatings. Langmuir, 2002, 18, 8278-8281.	1.6	70
26	Application of Fragment Screening and Merging to the Discovery of Inhibitors of the <i>Mycobacterium tuberculosis</i> Cytochromeâ€…P450 CYP121. Angewandte Chemie - International Edition, 2012, 51, 9311-9316.	7.2	69
27	High-throughput detection of ethanol-producing cyanobacteria in a microdroplet platform. Journal of the Royal Society Interface, 2015, 12, 20150216.	1.5	66
28	Surface-stress sensors for rapid and ultrasensitive detection of active free drugs in human serum. Nature Nanotechnology, 2014, 9, 225-232.	15.6	58
29	Unexpected stability of aqueous dispersions of raspberry-like colloids. Nature Communications, 2018, 9, 3614.	5.8	57
30	Inhibition of <i>Mycobacterium tuberculosis</i> Pantothenate Synthetase by Analogues of the Reaction Intermediate. ChemBioChem, 2008, 9, 2606-2611.	1.3	56
31	Specific inhibition of CK2Î± from an anchor outside the active site. Chemical Science, 2016, 7, 6839-6845.	3.7	55
32	Building Three-Dimensional Surface Biological Assemblies on the Nanometer Scale. Nano Letters, 2003, 3, 1517-1520.	4.5	51
33	Fragment-Based Approach to Targeting Inosine-5â€²-monophosphate Dehydrogenase (IMPDH) from <i>Mycobacterium tuberculosis</i>. Journal of Medicinal Chemistry, 2018, 61, 2806-2822.	2.9	51
34	Supramolecular Nested Microbeads as Building Blocks for Macroscopic Selfâ€Healing Scaffolds. Angewandte Chemie - International Edition, 2018, 57, 3079-3083.	7.2	50
35	Fragment-Based Approaches to the Development of <i>Mycobacterium tuberculosis</i> CYP121 Inhibitors. Journal of Medicinal Chemistry, 2016, 59, 3272-3302.	2.9	47
36	Electrostatically Directed Selfâ€Assembly of Ultrathin Supramolecular Polymer Microcapsules. Advanced Functional Materials, 2015, 25, 4091-4100.	7.8	44

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37	Label-Free Analysis and Sorting of Microalgae and Cyanobacteria in Microdroplets by Intrinsic Chlorophyll Fluorescence for the Identification of Fast Growing Strains. Analytical Chemistry, 2016, 88, 10445-10451.	3.2	42
38	Method to determine the spring constant of atomic force microscope cantilevers. Review of Scientific Instruments, 2004, 75, 565-567.	0.6	41
39	A fragment merging approach towards the development of small molecule inhibitors of Mycobacterium tuberculosis EthR for use as ethionamide boosters. Organic and Biomolecular Chemistry, 2016, 14, 2318-2326.	1.5	41
40	Structure-Based Identification of Inhibitory Fragments Targeting the p300/CBP-Associated Factor Bromodomain. Journal of Medicinal Chemistry, 2016, 59, 1648-1653.	2.9	39
41	A nondestructive technique for determining the spring constant of atomic force microscope cantilevers. Review of Scientific Instruments, 2001, 72, 2340-2343.	0.6	37
42	Selective small molecule inhibitor of the <i>Mycobacterium tuberculosis</i> fumarate hydratase reveals an allosteric regulatory site. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7503-7508.	3.3	36
43	Aqueous interfacial gels assembled from small molecule supramolecular polymers. Chemical Science, 2017, 8, 1350-1355.	3.7	35
44	Formation of Cucurbit[8]uril-Based Supramolecular Hydrogel Beads Using Droplet-Based Microfluidics. Biomacromolecules, 2015, 16, 2743-2749.	2.6	34
45	Monitoring Earlyâ€Stage Nanoparticle Assembly in Microdroplets by Optical Spectroscopy and SERS. Small, 2016, 12, 1788-1796.	5.2	34
46	Effect of DMSO on Protein Structure and Interactions Assessed by Collision-Induced Dissociation and Unfolding. Analytical Chemistry, 2017, 89, 9976-9983.	3.2	34
47	Microfluidic Droplet-Facilitated Hierarchical Assembly for Dual Cargo Loading and Synergistic Delivery. ACS Applied Materials & Interfaces, 2016, 8, 8811-8820.	4.0	33
48	A structure-guided fragment-based approach for the discovery of allosteric inhibitors targeting the lipophilic binding site of transcription factor EthR. Biochemical Journal, 2014, 458, 387-394.	1.7	32
49	Development of Inhibitors against <i>Mycobacterium abscessus</i> tRNA (m¹G37) Methyltransferase (TrmD) Using Fragment-Based Approaches. Journal of Medicinal Chemistry, 2019, 62, 7210-7232.	2.9	32
50	Spatially Controlled Supramolecular Polymerization of Peptide Nanotubes by Microfluidics. Angewandte Chemie - International Edition, 2020, 59, 6902-6908.	7.2	32
51	Patterned Arrays of Supramolecular Microcapsules. Advanced Functional Materials, 2018, 28, 1800550.	7.8	31
52	Structure-guided fragment-based drug discovery at the synchrotron: screening binding sites and correlations with hotspot mapping. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180422.	1.6	30
53	Overcoming the Limitations of Fragment Merging: Rescuing a Strained Merged Fragment Series Targeting <i>Mycobacterium tuberculosis</i> CYP121. ChemMedChem, 2013, 8, 1451-1456.	1.6	28
54	The Application of Ligand-Mapping Molecular Dynamics Simulations to the Rational Design of Peptidic Modulators of Proteinâ€“Protein Interactions. Journal of Chemical Theory and Computation, 2015, 11, 3199-3210.	2.3	28

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55	Pantothenate biosynthesis in higher plants: advances and challenges. Physiologia Plantarum, 2006, 126, 319-329.	2.6	27
56	Optimization of Inhibitors of <i>Mycobacterium tuberculosis</i> Pantothenate Synthetase Based on Group Efficiency Analysis. ChemMedChem, 2016, 11, 38-42.	1.6	27
57	Fragment-Based Design of <i>Mycobacterium tuberculosis</i> InhA Inhibitors. Journal of Medicinal Chemistry, 2020, 63, 4749-4761.	2.9	27
58	A small-molecule inhibitor of the BRCA2-RAD51 interaction modulates RAD51 assembly and potentiates DNA damage-induced cell death. Cell Chemical Biology, 2021, 28, 835-847.e5.	2.5	27
59	2-Aminothiazole Derivatives as Selective Allosteric Modulators of the Protein Kinase CK2. 1. Identification of an Allosteric Binding Site. Journal of Medicinal Chemistry, 2019, 62, 1803-1816.	2.9	25
60	Bioinspired hydrogel microfibres colour-encoded with colloidal crystals. Materials Horizons, 2019, 6, 1938-1943.	6.4	25
61	Fragment-Sized EthR Inhibitors Exhibit Exceptionally Strong Ethionamide Boosting Effect in Whole-Cell <i>Mycobacterium tuberculosis</i> Assays. ACS Chemical Biology, 2017, 12, 1390-1396.	1.6	24
62	Real Time Dual-Channel Multiplex SERS Ultradetection. Journal of Physical Chemistry Letters, 2014, 5, 73-79.	2.1	23
63	Droplet-based microfluidic analysis and screening of single plant cells. PLoS ONE, 2018, 13, e0196810.	1.1	23
64	Viscoelastic Hydrogel Microfibers Exploiting Cucurbit[8]uril Hostâ€“Guest Chemistry and Microfluidics. ACS Applied Materials & Interfaces, 2020, 12, 17929-17935.	4.0	23
65	Droplet-based microfluidic screening and sorting of microalgal populations for strain engineering applications. Algal Research, 2021, 56, 102293.	2.4	23
66	Dual-responsive supramolecular colloidal microcapsules from cucurbit[8]uril molecular recognition in microfluidic droplets. Polymer Chemistry, 2016, 7, 5996-6002.	1.9	22
67	Target Identification of Mycobacterium tuberculosis Phenotypic Hits Using a Concerted Chemogenomic, Biophysical, and Structural Approach. Frontiers in Pharmacology, 2017, 8, 681.	1.6	22
68	Inhibition of Ral GTPases Using a Stapled Peptide Approach. Journal of Biological Chemistry, 2016, 291, 18310-18325.	1.6	20
69	Disrupting the Constitutive, Homodimeric Proteinâ€“Protein Interface in CK2Î² Using a Biophysical Fragment-Based Approach. Journal of the American Chemical Society, 2016, 138, 14303-14311.	6.6	20
70	Structureâ€activity relationship of the peptide bindingâ€motif mediating the BRCA2:RAD51 proteinâ€“protein interaction. FEBS Letters, 2016, 590, 1094-1102.	1.3	20
71	Mass Spectrometry Reveals Protein Kinase CK2 High-Order Oligomerization <i>via</i> the Circular and Linear Assembly. ACS Chemical Biology, 2016, 11, 1511-1517.	1.6	20
72	Fragment-based discovery of a new class of inhibitors targeting mycobacterial tRNA modification. Nucleic Acids Research, 2020, 48, 8099-8112.	6.5	20

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73	Spirooxindoles as novel 3D-fragment scaffolds: Synthesis and screening against CYP121 from M. tuberculosis. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3735-3740.	1.0	19
74	Fragment-based approaches to TB drugs. Parasitology, 2018, 145, 184-195.	0.7	18
75	Structural insights into the EthRâ€"DNA interaction using native mass spectrometry. Chemical Communications, 2017, 53, 3527-3530.	2.2	17
76	2-Aminothiazole Derivatives as Selective Allosteric Modulators of the Protein Kinase CK2. 2. Structure-Based Optimization and Investigation of Effects Specific to the Allosteric Mode of Action. Journal of Medicinal Chemistry, 2019, 62, 1817-1836.	2.9	17
77	Microcapsule Buckling Triggered by Compression-Induced Interfacial Phase Change. Langmuir, 2016, 32, 10987-10994.	1.6	16
78	A fragment-based approach to assess the ligandability of ArgB, ArgC, ArgD and ArgF in the L-arginine biosynthetic pathway of Mycobacterium tuberculosis. Computational and Structural Biotechnology Journal, 2021, 19, 3491-3506.	1.9	16
79	Substrate Fragmentation for the Design of <i>M.â€…tuberculosis</i> CYP121 Inhibitors. ChemMedChem, 2016, 11, 1924-1935.	1.6	15
80	Mass spectrometry for fragment screening. Essays in Biochemistry, 2017, 61, 465-473.	2.1	15
81	Pantothenic Acid Biosynthesis in the Parasite Toxoplasma gondii: a Target for Chemotherapy. Antimicrobial Agents and Chemotherapy, 2014, 58, 6345-6353.	1.4	13
82	Engineering Archeal Surrogate Systems for the Development of Proteinâ€"Protein Interaction Inhibitors against Human RAD51. Journal of Molecular Biology, 2016, 428, 4589-4607.	2.0	13
83	Structural Characterization and Ligand/Inhibitor Identification Provide Functional Insights into the Mycobacterium tuberculosis Cytochrome P450 CYP126A1. Journal of Biological Chemistry, 2017, 292, 1310-1329.	1.6	13
84	Using a Fragment-Based Approach to Identify Alternative Chemical Scaffolds Targeting Dihydrofolate Reductase from <i>Mycobacterium tuberculosis</i>. ACS Infectious Diseases, 2020, 6, 2192-2201.	1.8	13
85	A Simple Voltage Controlled Enzymatic Nanoreactor Produced in the Tip of a Nanopipet. Nano Letters, 2004, 4, 1859-1862.	4.5	12
86	Fragment Screening against the EthRâ€"DNA Interaction by Native Mass Spectrometry. Angewandte Chemie - International Edition, 2017, 56, 7488-7491.	7.2	12
87	Selective Targeting of the TPX2 Site of Importinâ€Î± Using Fragmentâ€Based Ligand Design. ChemMedChem, 2015, 10, 1232-1239.	1.6	11
88	Spatially Controlled Supramolecular Polymerization of Peptide Nanotubes by Microfluidics. Angewandte Chemie, 2020, 132, 6969-6975.	1.6	11
89	Development of Inhibitors of SAICAR Synthetase (PurC) from <i>Mycobacterium abscessus</i> Using a Fragment-Based Approach. ACS Infectious Diseases, 2022, 8, 296-309.	1.8	10
90	Supracolloidal Architectures Selfâ€Assembled in Microdroplets. Chemistry - A European Journal, 2015, 21, 15516-15519.	1.7	9

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91	Motile Artificial Chromatophores: Lightâ€Triggered Nanoparticles for Microdroplet Locomotion and Color Change. Advanced Optical Materials, 2019, 7, 1900951.	3.6	9
92	Targeting of Fumarate Hydratase from <i>Mycobacterium tuberculosis</i> Using Allosteric Inhibitors with a Dimeric-Binding Mode. Journal of Medicinal Chemistry, 2019, 62, 10586-10604.	2.9	9
93	Construction of coreâ€"shell microcapsules <i>via</i> focused surface acoustic wave microfluidics. Lab on A Chip, 2020, 20, 3104-3108.	3.1	9
94	Microdroplets confined assembly of opal composites in dynamic borate ester-based networks. Chemical Engineering Journal, 2021, 426, 127581.	6.6	9
95	Surface mediated cooperative interactions of drugs enhance mechanical forces for antibiotic action. Scientific Reports, 2017, 7, 41206.	1.6	8
96	Inhibiting Mycobacterium tuberculosis CoaBC by targeting an allosteric site. Nature Communications, 2021, 12, 143.	5.8	8
97	Structural characterization of CYP144A1 â€" a cytochrome P450 enzyme expressed from alternative transcripts in Mycobacterium tuberculosis. Scientific Reports, 2016, 6, 26628.	1.6	7
98	Insight into Protein Conformation and Subcharging by DMSO from Native Ion Mobility Mass Spectrometry. ChemistrySelect, 2016, 1, 5686-5690.	0.7	7
99	Cucurbit[7]uril-based high-performance catalytic microreactors. Nanoscale, 2018, 10, 14835-14839.	2.8	7
100	Supramolecular Nested Microbeads as Building Blocks for Macroscopic Selfâ€Healing Scaffolds. Angewandte Chemie, 2018, 130, 3133-3137.	1.6	6
101	Fragment Profiling Approach to Inhibitors of the Orphan <i>M. tuberculosis</i> P450 CYP144A1. Biochemistry, 2017, 56, 1559-1572.	1.2	5
102	Discovery of Novel Inhibitors of Uridine Diphosphate-<i>N</i>-Acetylenolpyruvylglucosamine Reductase (MurB) from <i>Pseudomonas aeruginosa</i>, an Opportunistic Infectious Agent Causing Death in Cystic Fibrosis Patients. Journal of Medicinal Chemistry, 2022, 65, 2149-2173.	2.9	5
103	Structural Characterization of Mycobacterium abscessus Phosphopantetheine Adenylyl Transferase Ligand Interactions: Implications for Fragment-Based Drug Design. Frontiers in Molecular Biosciences, 2022, 9, .	1.6	5
104	Single-Cell Analysis Identifies Thymic Maturation Delay in Growth-Restricted Neonatal Mice. Frontiers in Immunology, 2018, 9, 2523.	2.2	4
105	Structural insights into <i>Escherichia coli</i> phosphopantothenoylcysteine synthetase by native ion mobilityâ€"mass spectrometry. Biochemical Journal, 2019, 476, 3125-3139.	1.7	4
106	A new strategy for hit generation: Novel in cellulo active inhibitors of CYP121A1 from Mycobacterium tuberculosis via a combined X-ray crystallographic and phenotypic screening approach (XP screen). European Journal of Medicinal Chemistry, 2022, 230, 114105.	2.6	4
107	Targeting <i>Mycobacterium tuberculosis</i> CoaBC through Chemical Inhibition of 4â€²-Phosphopantothenoyl-<scp>l</scp>-cysteine Synthetase (CoaB) Activity. ACS Infectious Diseases, 2021, 7, 1666-1679.	1.8	3
108	Fragment Screening against the EthRâ€"DNA Interaction by Native Mass Spectrometry. Angewandte Chemie, 2017, 129, 7596-7599.	1.6	2

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109	Covalent inactivation of Mycobacterium thermoresistibile inosine-5â€²-monophosphate dehydrogenase (IMPDH). Bioorganic and Medicinal Chemistry Letters, 2020, 30, 126792.	1.0	2
110	Potential therapeutic targets from <i>Mycobacterium abscessus</i> (<i>Mab</i>): recently reported efforts towards the discovery of novel antibacterial agents to treat <i>Mab</i> infections. RSC Medicinal Chemistry, 0, , .	1.7	1
111	Successful use of axonal transport for drug delivery by synthetic molecular vehicles. Nature Precedings, 2008, , .	0.1	0