Chris Abell

List of Publications by Citations

110 papers	5,987 citations	34 h-index	76 g-index
126 ext. papers	6,962 ext. citations	9.8 avg, IF	5.9 L-index

#	Paper	IF	Citations
110	Microdroplets in microfluidics: an evolving platform for discoveries in chemistry and biology. *Angewandte Chemie - International Edition*, **2010**, 49, 5846-68	16.4	782
109	Small molecules, big targets: drug discovery faces the protein-protein interaction challenge. *Nature Reviews Drug Discovery*, **2016**, 15, 533-50	64.1	555
108	High-throughput crystallography for lead discovery in drug design. *Nature Reviews Drug Discovery*, **2002**, 1, 45-54	64.1	432
107	One-step fabrication of supramolecular microcapsules from microfluidic droplets. *Science*, **2012**, 335, 690-4	33.3	365
106	Fragment-based approaches in drug discovery and chemical biology. *Biochemistry*, **2012**, 51, 4990-5003	3.2	315
105	Tough Supramolecular Polymer Networks with Extreme Stretchability and Fast Room-Temperature Self-Healing. *Advanced Materials*, **2017**, 29, 1605325	24	234
104	Direct and sensitive detection of a human virus by rupture event scanning. *Nature Biotechnology*, **2001**, 19, 833-7	44.5	160
103	Biomimetic Supramolecular Polymer Networks Exhibiting both Toughness and Self-Recovery. *Advanced Materials*, **2017**, 29, 1604951	24	148
102	Cucurbit[n]uril-Based Microcapsules Self-Assembled within Microfluidic Droplets: A Versatile Approach for Supramolecular Architectures and Materials. *Accounts of Chemical Research*, **2017**, 50, 208-217	24.3	143
101	Probing hot spots at protein-ligand binding sites: a fragment-based approach using biophysical methods. *Journal of Medicinal Chemistry*, **2006**, 49, 4992-5000	8.3	128
100	Hierarchical Self-Assembly of Cellulose Nanocrystals in a Confined Geometry. *ACS Nano*, **2016**, 10, 8443-9	16.7	122
99	Application of fragment growing and fragment linking to the discovery of inhibitors of Mycobacterium tuberculosis pantothenate synthetase. *Angewandte Chemie - International Edition*, **2009**, 48, 8452-6	16.4	120
98	Evolution of enzyme catalysts caged in biomimetic gel-shell beads. *Nature Chemistry*, **2014**, 6, 791-6	17.6	119
97	A three-stage biophysical screening cascade for fragment-based drug discovery. *Nature Protocols*, **2013**, 8, 2309-24	18.8	103
96	Using a fragment-based approach to target protein-protein interactions. *ChemBioChem*, **2013**, 14, 332-42	3.8	99
95	Pathway-selective sensitization of Mycobacterium tuberculosis for target-based whole-cell screening. *Chemistry and Biology*, **2012**, 19, 844-54		89
94	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, 12984-9	11.5	83

93	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	11.5	76
92	AFM Study on Protein Immobilization on Charged Surfaces at the Nanoscale: Toward the Fabrication of Three-Dimensional Protein Nanostructures. *Langmuir*, **2003**, 19, 10557-10562	4	75
91	Droplet microfluidics for the highly controlled synthesis of branched gold nanoparticles. *Scientific Reports*, **2018**, 8, 2440	4.9	70
90	Drugging challenging targets using fragment-based approaches. *Current Opinion in Chemical Biology*, **2010**, 14, 299-307	9.7	70
89	Interfacial assembly of dendritic microcapsules with host-guest chemistry. *Nature Communications*, **2014**, 5, 5772	17.4	69
88	Supramolecular hydrogel microcapsules cucurbit[8]uril host-guest interactions with triggered and UV-controlled molecular permeability. *Chemical Science*, **2015**, 6, 4929-4933	9.4	65
87	Application of fragment screening and merging to the discovery of inhibitors of the Mycobacterium tuberculosis cytochrome P450 CYP121. *Angewandte Chemie - International Edition*, **2012**, 51, 9311-6	16.4	64
86	Use of Atomic Force Microscopy for Making Addresses in DNA Coatings. *Langmuir*, **2002**, 18, 8278-8281	4	61
85	Validating fragment-based drug discovery for biological RNAs: lead fragments bind and remodel the TPP riboswitch specifically. *Chemistry and Biology*, **2014**, 21, 591-5		55
84	Surface-stress sensors for rapid and ultrasensitive detection of active free drugs in human serum. *Nature Nanotechnology*, **2014**, 9, 225-32	28.7	52
83	High-throughput detection of ethanol-producing cyanobacteria in a microdroplet platform. *Journal of the Royal Society Interface*, **2015**, 12,	4.1	47
82	Inhibition of Mycobacterium tuberculosis pantothenate synthetase by analogues of the reaction intermediate. *ChemBioChem*, **2008**, 9, 2606-11	3.8	47
81	Building Three-Dimensional Surface Biological Assemblies on the Nanometer Scale. *Nano Letters*, **2003**, 3, 1517-1520	11.5	47
80	Supramolecular Nested Microbeads as Building Blocks for Macroscopic Self-Healing Scaffolds. *Angewandte Chemie - International Edition*, **2018**, 57, 3079-3083	16.4	43
79	Fragment-Based Approaches to the Development of Mycobacterium tuberculosis CYP121 Inhibitors. *Journal of Medicinal Chemistry*, **2016**, 59, 3272-302	8.3	41
78	Specific inhibition of CK2 from an anchor outside the active site. *Chemical Science*, **2016**, 7, 6839-6845	9.4	39
77	Unexpected stability of aqueous dispersions of raspberry-like colloids. *Nature Communications*, **2018**, 9, 3614	17.4	35
76	Structure-Based Identification of Inhibitory Fragments Targeting the p300/CBP-Associated Factor Bromodomain. *Journal of Medicinal Chemistry*, **2016**, 59, 1648-53	8.3	34

75	A nondestructive technique for determining the spring constant of atomic force microscope cantilevers. *Review of Scientific Instruments*, **2001**, 72, 2340-2343	1.7	33
74	Fragment-Based Approach to Targeting Inosine-5∀monophosphate Dehydrogenase (IMPDH) from Mycobacterium tuberculosis. *Journal of Medicinal Chemistry*, **2018**, 61, 2806-2822	8.3	32
73	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, 2318-26	3.9	32
72	Electrostatically Directed Self-Assembly of Ultrathin Supramolecular Polymer Microcapsules. *Advanced Functional Materials*, **2015**, 25, 4091-4100	15.6	32
71	Formation of Cucurbit[8]uril-Based Supramolecular Hydrogel Beads Using Droplet-Based Microfluidics. *Biomacromolecules*, **2015**, 16, 2743-9	6.9	29
70	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	7.8	29
69	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, 387-94	3.8	27
68	Monitoring Early-Stage Nanoparticle Assembly in Microdroplets by Optical Spectroscopy and SERS. *Small*, **2016**, 12, 1788-96	11	27
67	Selective small molecule inhibitor of the Mycobacterium tuberculosis fumarate hydratase reveals an allosteric regulatory site. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 7503-8	11.5	26
66	The Application of Ligand-Mapping Molecular Dynamics Simulations to the Rational Design of Peptidic Modulators of Protein-Protein Interactions. *Journal of Chemical Theory and Computation*, **2015**, 11, 3199-210	6.4	25
65	Aqueous interfacial gels assembled from small molecule supramolecular polymers. *Chemical Science*, **2017**, 8, 1350-1355	9.4	25
64	Overcoming the limitations of fragment merging: rescuing a strained merged fragment series targeting Mycobacterium tuberculosis CYP121. *ChemMedChem*, **2013**, 8, 1451-6	3.7	25
63	Patterned Arrays of Supramolecular Microcapsules. *Advanced Functional Materials*, **2018**, 28, 1800550	15.6	24
62	Microfluidic Droplet-Facilitated Hierarchical Assembly for Dual Cargo Loading and Synergistic Delivery. *ACS Applied Materials & Interfaces*, **2016**, 8, 8811-20	9.5	24
61	Real Time Dual-Channel Multiplex SERS Ultradetection. *Journal of Physical Chemistry Letters*, **2014**, 5, 73-9	6.4	23
60	Pantothenate biosynthesis in higher plants: advances and challenges. *Physiologia Plantarum*, **2006**, 126, 319-329	4.6	23
59	Method to determine the spring constant of atomic force microscope cantilevers. *Review of Scientific Instruments*, **2004**, 75, 565-567	1.7	23
58	Effect of DMSO on Protein Structure and Interactions Assessed by Collision-Induced Dissociation and Unfolding. *Analytical Chemistry*, **2017**, 89, 9976-9983	7.8	22

57	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	8.3	20
56	Optimization of Inhibitors of Mycobacterium tuberculosis Pantothenate Synthetase Based on Group Efficiency Analysis. *ChemMedChem*, **2016**, 11, 38-42	3.7	19
55	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	3	18
54	Fragment-Sized EthR Inhibitors Exhibit Exceptionally Strong Ethionamide Boosting Effect in Whole-Cell Mycobacterium tuberculosis Assays. *ACS Chemical Biology*, **2017**, 12, 1390-1396	4.9	17
53	Spatially Controlled Supramolecular Polymerization of Peptide Nanotubes by Microfluidics. *Angewandte Chemie - International Edition*, **2020**, 59, 6902-6908	16.4	17
52	Inhibition of Ral GTPases Using a Stapled Peptide Approach. *Journal of Biological Chemistry*, **2016**, 291, 18310-25	5.4	16
51	Dual-responsive supramolecular colloidal microcapsules from cucurbit[8]uril molecular recognition in microfluidic droplets. *Polymer Chemistry*, **2016**, 7, 5996-6002	4.9	16
50	Droplet-based microfluidic analysis and screening of single plant cells. *PLoS ONE*, **2018**, 13, e0196810	3.7	16
49	Structural insights into the EthR-DNA interaction using native mass spectrometry. *Chemical Communications*, **2017**, 53, 3527-3530	5.8	15
48	Development of Inhibitors against tRNA (mG37) Methyltransferase (TrmD) Using Fragment-Based Approaches. *Journal of Medicinal Chemistry*, **2019**, 62, 7210-7232	8.3	15
47	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	8.3	14
46	Fragment-Based Design of InhA Inhibitors. *Journal of Medicinal Chemistry*, **2020**, 63, 4749-4761	8.3	14
45	Microcapsule Buckling Triggered by Compression-Induced Interfacial Phase Change. *Langmuir*, **2016**, 32, 10987-10994	4	14
44	Target Identification of Phenotypic Hits Using a Concerted Chemogenomic, Biophysical, and Structural Approach. *Frontiers in Pharmacology*, **2017**, 8, 681	5.6	14
43	Bioinspired hydrogel microfibres colour-encoded with colloidal crystals. *Materials Horizons*, **2019**, 6, 1938-1943	14.4	13
42	Fragment-based approaches to TB drugs. *Parasitology*, **2018**, 145, 184-195	2.7	13
41	Substrate Fragmentation for the Design of M. tuberculosis CYP121 Inhibitors. *ChemMedChem*, **2016**, 11, 1924-35	3.7	13
40	Disrupting the Constitutive, Homodimeric Protein-Protein Interface in CK2α Using a Biophysical Fragment-Based Approach. *Journal of the American Chemical Society*, **2016**, 138, 14303-14311	16.4	13

39	Spirooxindoles as novel 3D-fragment scaffolds: Synthesis and screening against CYP121 from M. tuberculosis. *Bioorganic and Medicinal Chemistry Letters*, **2016**, 26, 3735-40	2.9	13
38	Mass spectrometry for fragment screening. *Essays in Biochemistry*, **2017**, 61, 465-473	7.6	12
37	Structural Characterization and Ligand/Inhibitor Identification Provide Functional Insights into the Mycobacterium tuberculosis Cytochrome P450 CYP126A1. *Journal of Biological Chemistry*, **2017**, 292, 1310-1329	5.4	11
36	Pantothenic acid biosynthesis in the parasite Toxoplasma gondii: a target for chemotherapy. *Antimicrobial Agents and Chemotherapy*, **2014**, 58, 6345-53	5.9	11
35	A Simple Voltage Controlled Enzymatic Nanoreactor Produced in the Tip of a Nanopipet. *Nano Letters*, **2004**, 4, 1859-1862	11.5	11
34	Fragment Screening against the EthR-DNA Interaction by Native Mass Spectrometry. *Angewandte Chemie - International Edition*, **2017**, 56, 7488-7491	16.4	10
33	Viscoelastic Hydrogel Microfibers Exploiting Cucurbit[8]uril Host-Guest Chemistry and Microfluidics. *ACS Applied Materials & Interfaces*, **2020**, 12, 17929-17935	9.5	10
32	Fragment-based discovery of a new class of inhibitors targeting mycobacterial tRNA modification. *Nucleic Acids Research*, **2020**, 48, 8099-8112	20.1	10
31	Mass Spectrometry Reveals Protein Kinase CK2 High-Order Oligomerization via the Circular and Linear Assembly. *ACS Chemical Biology*, **2016**, 11, 1511-7	4.9	10
30	Selective Targeting of the TPX2 Site of Importin-β Using Fragment-Based Ligand Design. *ChemMedChem*, **2015**, 10, 1232-9	3.7	10
29	Application of Fragment Screening and Merging to the Discovery of Inhibitors of the Mycobacterium tuberculosis Cytochrome P450 CYP121. *Angewandte Chemie*, **2012**, 124, 9445-9450	3.6	8
28	Surface mediated cooperative interactions of drugs enhance mechanical forces for antibiotic action. *Scientific Reports*, **2017**, 7, 41206	4.9	7
27	Spatially Controlled Supramolecular Polymerization of Peptide Nanotubes by Microfluidics. *Angewandte Chemie*, **2020**, 132, 6969-6975	3.6	7
26	Motile Artificial Chromatophores: Light-Triggered Nanoparticles for Microdroplet Locomotion and Color Change. *Advanced Optical Materials*, **2019**, 7, 1900951	8.1	7
25	Supracolloidal Architectures Self-Assembled in Microdroplets. *Chemistry - A European Journal*, **2015**, 21, 15516-9	4.8	7
24	Differential Scanning Fluorimetry as Part of a Biophysical Screening Cascade. *Methods and Principles in Medicinal Chemistry*, **2016**, 139-172	0.4	7
23	Targeting of Fumarate Hydratase from Using Allosteric Inhibitors with a Dimeric-Binding Mode. *Journal of Medicinal Chemistry*, **2019**, 62, 10586-10604	8.3	6
22	Supramolecular Nested Microbeads as Building Blocks for Macroscopic Self-Healing Scaffolds. *Angewandte Chemie*, **2018**, 130, 3133-3137	3.6	6

21	Structural characterization of CYP144A1 - a cytochrome P450 enzyme expressed from alternative transcripts in Mycobacterium tuberculosis. *Scientific Reports*, **2016**, 6, 26628	4.9	6
20	Insight into Protein Conformation and Subcharging by DMSO from Native Ion Mobility Mass Spectrometry. *ChemistrySelect*, **2016**, 1, 5686-5690	1.8	6
19	Engineering Archeal Surrogate Systems for the Development of Protein-Protein Interaction Inhibitors against Human RAD51. *Journal of Molecular Biology*, **2016**, 428, 4589-4607	6.5	6
18	Structure-activity relationship of the peptide binding-motif mediating the BRCA2:RAD51 protein-protein interaction. *FEBS Letters*, **2016**, 590, 1094-102	3.8	6
17	Using Ligand-Mapping Simulations to Design a Ligand Selectively Targeting a Cryptic Surface Pocket of Polo-Like Kinase 1. *Angewandte Chemie*, **2012**, 124, 10225-10228	3.6	6
16	Fragment Profiling Approach to Inhibitors of the Orphan M. tuberculosis P450 CYP144A1. *Biochemistry*, **2017**, 56, 1559-1572	3.2	5
15	Droplet-based microfluidic screening and sorting of microalgal populations for strain engineering applications. *Algal Research*, **2021**, 56, None	5	5
14	A fragment-based approach to assess the ligandability of ArgB, ArgC, ArgD and ArgF in the L-arginine biosynthetic pathway of. *Computational and Structural Biotechnology Journal*, **2021**, 19, 3491-3506	6.8	5
13	Cucurbit[7]uril-based high-performance catalytic microreactors. *Nanoscale*, **2018**, 10, 14835-14839	7.7	4
12	Construction of core-shell microcapsules focused surface acoustic wave microfluidics. *Lab on A Chip* , **2020**, 20, 3104-3108	7.2	4
11	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	8.2	4
10	Inhibiting Mycobacterium tuberculosis CoaBC by targeting an allosteric site. *Nature Communications*, **2021**, 12, 143	17.4	4
9	Structural insights into Escherichia coli phosphopantothenoylcysteine synthetase by native ion mobility-mass spectrometry. *Biochemical Journal*, **2019**, 476, 3125-3139	3.8	3
8	Microdroplets confined assembly of opal composites in dynamic borate ester-based networks. *Chemical Engineering Journal*, **2021**, 426, 127581	14.7	3
7	Single-Cell Analysis Identifies Thymic Maturation Delay in Growth-Restricted Neonatal Mice. *Frontiers in Immunology*, **2018**, 9, 2523	8.4	3
6	Using a Fragment-Based Approach to Identify Alternative Chemical Scaffolds Targeting Dihydrofolate Reductase from. *ACS Infectious Diseases*, **2020**, 6, 2192-2201	5.5	2
5	Covalent inactivation of Mycobacterium thermoresistibile inosine-5¥monophosphate dehydrogenase (IMPDH). *Bioorganic and Medicinal Chemistry Letters*, **2020**, 30, 126792	2.9	2
4	Fragment Screening against the EthR□DNA Interaction by Native Mass Spectrometry. *Angewandte Chemie*, **2017**, 129, 7596-7599	3.6	1

3	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	6.8	1
2	Targeting CoaBC through Chemical Inhibition of 4′-Phosphopantothenoyl-l-cysteine Synthetase (CoaB) Activity. *ACS Infectious Diseases*, **2021**, 7, 1666-1679	5.5	0
1	Potential therapeutic targets from Mycobacterium abscessus (Mab): recently reported efforts towards the discovery of novel antibacterial agents to treat Mab infections. *RSC Medicinal Chemistry*,	3.5	0