

# Arash Zarrine-Afsar

## List of Publications by Citations

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42  
papers

2,077  
citations

25  
h-index

44  
g-index

44  
ext. papers

2,268  
ext. citations

8.4  
avg, IF

4.44  
L-index

#	Paper	IF	Citations
42	Structure of an intermediate state in protein folding and aggregation. <i>Science</i> , <b>2012</b> , 336, 362-6	33.3	292
41	Unraveling the mechanism of protein disaggregation through a ClpB-DnaK interaction. <i>Science</i> , <b>2013</b> , 339, 1080-3	33.3	193
40	Protein folding: defining a "standard" set of experimental conditions and a preliminary kinetic data set of two-state proteins. <i>Protein Science</i> , <b>2005</b> , 14, 602-16	6.3	181
39	Single-molecule spectroscopy of protein conformational dynamics in live eukaryotic cells. <i>Nature Methods</i> , <b>2015</b> , 12, 773-9	21.6	170
38	Theoretical and experimental demonstration of the importance of specific nonnative interactions in protein folding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 9999-10004	11.5	109
37	Structure-based approach to the photocontrol of protein folding. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 2283-9	16.4	93
36	The family feud: do proteins with similar structures fold via the same pathway?. <i>Current Opinion in Structural Biology</i> , <b>2005</b> , 15, 42-9	8.1	84
35	Dramatic acceleration of protein folding by stabilization of a nonnative backbone conformation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 7954-9	11.5	74
34	Identification of a collapsed intermediate with non-native long-range interactions on the folding pathway of a pair of Fyn SH3 domain mutants by NMR relaxation dispersion spectroscopy. <i>Journal of Molecular Biology</i> , <b>2006</b> , 363, 958-76	6.5	73
33	Crystallography on a chip. <i>Acta Crystallographica Section D: Biological Crystallography</i> , <b>2012</b> , 68, 321-3		66
32	Computational design of the Fyn SH3 domain with increased stability through optimization of surface charge charge interactions. <i>Protein Science</i> , <b>2007</b> , 16, 2694-702	6.3	49
31	Rapid Detection of Necrosis in Breast Cancer with Desorption Electrospray Ionization Mass Spectrometry. <i>Scientific Reports</i> , <b>2016</b> , 6, 35374	4.9	48
30	Phi-value analysis of a three-state protein folding pathway by NMR relaxation dispersion spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 15717-22	11.5	46
29	The analysis of protein folding kinetic data produced in protein engineering experiments. <i>Methods</i> , <b>2004</b> , 34, 41-50	4.6	44
28	Gas-Phase FRET Efficiency Measurements To Probe the Conformation of Mass-Selected Proteins. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 7559-65	7.8	42
27	Use of capillary electrophoresis and endogenous fluorescent substrate to monitor intracellular activation of protein kinase A. <i>Analytical Chemistry</i> , <b>2003</b> , 75, 3720-4	7.8	41
26	Ambient Mass Spectrometry Imaging with Picosecond Infrared Laser Ablation Electrospray Ionization (PIR-LAESI). <i>Analytical Chemistry</i> , <b>2015</b> , 87, 12071-9	7.8	40

25	Kinetic consequences of native state optimization of surface-exposed electrostatic interactions in the Fyn SH3 domain. <i>Proteins: Structure, Function and Bioinformatics</i> , <b>2012</b> , 80, 858-70	4.2	40
24	Conformational instability of the MARK3 UBA domain compromises ubiquitin recognition and promotes interaction with the adjacent kinase domain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 14336-41	11.5	39
23	Abp1p and Fyn SH3 domains fold through similar low-populated intermediate states. <i>Biochemistry</i> , <b>2006</b> , 45, 10175-83	3.2	37
22	Protein stabilization by specific binding of guanidinium to a functional arginine-binding surface on an SH3 domain. <i>Protein Science</i> , <b>2006</b> , 15, 162-70	6.3	37
21	Wide-field tissue polarimetry allows efficient localized mass spectrometry imaging of biological tissues. <i>Chemical Science</i> , <b>2016</b> , 7, 2162-2169	9.4	35
20	Optimized Mass Spectrometry Analysis Workflow with Polarimetric Guidance for ex vivo and in situ Sampling of Biological Tissues. <i>Scientific Reports</i> , <b>2017</b> , 7, 468	4.9	30
19	Contrast Agent Mass Spectrometry Imaging Reveals Tumor Heterogeneity. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 7683-9	7.8	28
18	Rapid determination of medulloblastoma subgroup affiliation with mass spectrometry using a handheld picosecond infrared laser desorption probe. <i>Chemical Science</i> , <b>2017</b> , 8, 6508-6519	9.4	27
17	An Assessment of the Utility of Tissue Smears in Rapid Cancer Profiling with Desorption Electrospray Ionization Mass Spectrometry (DESI-MS). <i>Journal of the American Society for Mass Spectrometry</i> , <b>2017</b> , 28, 145-153	3.5	22
16	Protein species as diagnostic markers. <i>Journal of Proteomics</i> , <b>2016</b> , 134, 5-18	3.9	21
15	The osmolyte trimethylamine-N-oxide stabilizes the Fyn SH3 domain without altering the structure of its folding transition state. <i>Protein Science</i> , <b>2009</b> , 18, 526-36	6.3	21
14	Picosecond Infrared Laser Desorption Mass Spectrometry Identifies Medulloblastoma Subgroups on Intrасurgical Timescales. <i>Cancer Research</i> , <b>2019</b> , 79, 2426-2434	10.1	18
13	Self-localizing stabilized mega-pixel picoliter arrays with size-exclusion sorting capabilities. <i>Analytical Chemistry</i> , <b>2011</b> , 83, 767-73	7.8	12
12	Protein folding kinetics provides a context-independent assessment of beta-strand propensity in the Fyn SH3 domain. <i>Journal of Molecular Biology</i> , <b>2007</b> , 373, 764-74	6.5	12
11	Variations in the Abundance of Lipid Biomarker Ions in Mass Spectrometry Images Correlate to Tissue Density. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 12099-12107	7.8	11
10	tissue pathology from spatially encoded mass spectrometry classifiers visualized in real time through augmented reality. <i>Chemical Science</i> , <b>2020</b> , 11, 8723-8735	9.4	9
9	Rapid determination of the tumour stroma ratio in squamous cell carcinomas with desorption electrospray ionization mass spectrometry (DESI-MS): a proof-of-concept demonstration. <i>Analyst</i> , <b>2017</b> , 142, 3250-3260	5	8
8	Dual Laser and Desorption Electrospray Ionization Mass Spectrometry Imaging Using the Same Interface. <i>Analytical Chemistry</i> , <b>2020</b> , 92, 6349-6357	7.8	7

- 7 A residue in helical conformation in the native state adopts a  $\beta$ -strand conformation in the folding transition state despite its high and canonical  $\Phi$ -value. *Proteins: Structure, Function and Bioinformatics*, **2012**, 80, 1343-9 4.2 6
- 6 Mass Spectrometry Imaging Reveals a Gradient of Cancer-like Metabolic States in the Vicinity of Cancer Not Seen in Morphometric Margins from Microscopy. *Analytical Chemistry*, **2021**, 93, 4408-4416 7.8 4
- 5 Platforms for rapid cancer characterization by ambient mass spectrometry: advancements, challenges and opportunities for improvement towards intrasurgical use. *Analyst, The*, **2018**, 143, 2717-2722 5.2 4
- 4 Ambient laser-based mass spectrometry analysis methods: a survey of core technologies and reported applications **2020**, 119-169 1
- 3 Mutational investigation of protein folding transition states by Phi-value analysis and beyond: lessons from SH3 domain folding. *Biochemistry and Cell Biology*, **2010**, 88, 231-8 3.6 1
- 2 Breaking Through the Barrier: Regulatory Considerations Relevant to Ambient Mass Spectrometry at the Bedside. *Clinics in Laboratory Medicine*, **2021**, 41, 221-246 2.1 1
- 1 Potential impact of tissue molecular heterogeneity on ambient mass spectrometry profiles: a note of caution in choosing the right disease model. *Analytical and Bioanalytical Chemistry*, **2021**, 413, 2655-2664 4.4 0