

Yael Politi

List of Publications by Year in descending order

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Version: 2024-02-01

29
papers

3,195
citations

331670

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477307

29
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31
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31
docs citations

31
times ranked

3388
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Multiscale X-ray study of <i>Bacillus subtilis</i> biofilms reveals interlinked structural hierarchy and elemental heterogeneity. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 7.1 | 19 |
| 2 | Heat-Mediated Micro- and Nano-pore Evolution in Sea Urchin Biominerals. Crystal Growth and Design, 2022, 22, 3727-3739. | 3.0 | 3 |
| 3 | The spider cuticle: a remarkable material toolbox for functional diversity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200332. | 3.4 | 14 |
| 4 | Adaptations for Wear Resistance and Damage Resilience: Micromechanics of Spider Cuticular “Tools”. Advanced Functional Materials, 2020, 30, 2000400. | 14.9 | 26 |
| 5 | Epidermal Cell Surface Structure and Chitin-Protein Co-assembly Determine Fiber Architecture in the Locust Cuticle. ACS Applied Materials & Interfaces, 2020, 12, 25581-25590. | 8.0 | 22 |
| 6 | Additives Control the Stability of Amorphous Calcium Carbonate via Two Different Mechanisms: Surface Adsorption versus Bulk Incorporation. Advanced Functional Materials, 2020, 30, 2000003. | 14.9 | 49 |
| 7 | A hydrated crystalline calcium carbonate phase: Calcium carbonate hemihydrate. Science, 2019, 363, 396-400. | 12.6 | 153 |
| 8 | Growth and regrowth of adult sea urchin spines involve hydrated and anhydrous amorphous calcium carbonate precursors. Journal of Structural Biology: X, 2019, 1, 100004. | 1.3 | 19 |
| 9 | Mechanics of Arthropod Cuticle-Versatility by Structural and Compositional Variation. Springer Series in Materials Science, 2019, , 287-327. | 0.6 | 14 |
| 10 | Interplay between Calcite, Amorphous Calcium Carbonate, and Intracrystalline Organics in Sea Urchin Skeletal Elements. Crystal Growth and Design, 2018, 18, 2189-2201. | 3.0 | 34 |
| 11 | The Crystallization of Amorphous Calcium Carbonate is Kinetically Governed by Ion Impurities and Water. Advanced Science, 2018, 5, 1701000. | 11.2 | 101 |
| 12 | Hydrogen Bonding in Amorphous Calcium Carbonate and Molecular Reorientation Induced by Dehydration. Journal of Physical Chemistry C, 2018, 122, 3591-3598. | 3.1 | 42 |
| 13 | Nano-channels in the spider fang for the transport of Zn ions to cross-link His-rich proteins pre-deposited in the cuticle matrix. Arthropod Structure and Development, 2017, 46, 30-38. | 1.4 | 21 |
| 14 | Ordering of protein and water molecules at their interfaces with chitin nano-crystals. Journal of Structural Biology, 2016, 193, 124-131. | 2.8 | 22 |
| 15 | Opposite Particle Size Effect on Amorphous Calcium Carbonate Crystallization in Water and during Heating in Air. Chemistry of Materials, 2015, 27, 4237-4246. | 6.7 | 80 |
| 16 | Micro- and nano-structural details of a spider's filter for substrate vibrations: relevance for low-frequency signal transmission. Journal of the Royal Society Interface, 2015, 12, 20141111. | 3.4 | 31 |
| 17 | Role of Sacrificial Protein-Metal Bond Exchange in Mussel Byssal Thread Self-Healing. Biomacromolecules, 2015, 16, 2852-2861. | 5.4 | 95 |
| 18 | Multiscale structural gradients enhance the biomechanical functionality of the spider fang. Nature Communications, 2014, 5, 3894. | 12.8 | 76 |

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|----|--|------|-----------|
| 19 | A spider's biological vibration filter: Micromechanical characteristics of a biomaterial surface. <i>Acta Biomaterialia</i> , 2014, 10, 4832-4842. | 8.3 | 44 |
| 20 | The Mechanical Role of Metal Ions in Biogenic Protein-Based Materials. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 12026-12044. | 13.8 | 229 |
| 21 | Oxygen Spectroscopy and Polarization-Dependent Imaging Contrast (PIC)-Mapping of Calcium Carbonate Minerals and Biominerals. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8449-8457. | 2.6 | 60 |
| 22 | Structural and mechanical properties of the arthropod cuticle: Comparison between the fang of the spider <i>Cupiennius salei</i> and the carapace of American lobster <i>Homarus americanus</i> . <i>Journal of Structural Biology</i> , 2013, 183, 172-179. | 2.8 | 40 |
| 23 | A Spider's Fang: How to Design an Injection Needle Using Chitin-Based Composite Material. <i>Advanced Functional Materials</i> , 2012, 22, 2519-2528. | 14.9 | 153 |
| 24 | Role of Magnesium Ion in the Stabilization of Biogenic Amorphous Calcium Carbonate: A Structure-Function Investigation. <i>Chemistry of Materials</i> , 2010, 22, 161-166. | 6.7 | 204 |
| 25 | Overview of the amorphous precursor phase strategy in biomineralization. <i>Frontiers of Materials Science in China</i> , 2009, 3, 104-108. | 0.5 | 97 |
| 26 | Mechanism of Calcite Co-Orientation in the Sea Urchin Tooth. <i>Journal of the American Chemical Society</i> , 2009, 131, 18404-18409. | 13.7 | 181 |
| 27 | Transformation mechanism of amorphous calcium carbonate into calcite in the sea urchin larval spicule. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 17362-17366. | 7.1 | 380 |
| 28 | Asprich mollusk shell protein: in vitro experiments aimed at elucidating function in CaCO ₃ crystallization. <i>CrystEngComm</i> , 2007, 9, 1171. | 2.6 | 105 |
| 29 | Sea Urchin Spine Calcite Forms via a Transient Amorphous Calcium Carbonate Phase. <i>Science</i> , 2004, 306, 1161-1164. | 12.6 | 881 |