

Patricia M Dove

List of Publications by Year in descending order

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Version: 2024-02-01

49
papers

7,892
citations

101384

36
h-index

223531

46
g-index

50
all docs

50
docs citations

50
times ranked

7523
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Crystallization by particle attachment in synthetic, biogenic, and geologic environments. <i>Science</i> , 2015, 349, aaa6760. | 6.0 | 1,467 |
| 2 | The Role of Mg ²⁺ as an Impurity in Calcite Growth. <i>Science</i> , 2000, 290, 1134-1137. | 6.0 | 638 |
| 3 | Thermodynamics of Calcite Growth: Baseline for Understanding Biomineral Formation. , 1998, 282, 724-727. | | 448 |
| 4 | Kinetics of quartz dissolution in electrolyte solutions using a hydrothermal mixed flow reactor. <i>Geochimica Et Cosmochimica Acta</i> , 1990, 54, 955-969. | 1.6 | 422 |
| 5 | Kinetics of calcite growth: surface processes and relationships to macroscopic rate laws. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 2255-2266. | 1.6 | 388 |
| 6 | Calcite precipitation mechanisms and inhibition by orthophosphate: In situ observations by Scanning Force Microscopy. <i>Geochimica Et Cosmochimica Acta</i> , 1993, 57, 705-714. | 1.6 | 309 |
| 7 | The dissolution kinetics of amorphous silica into sodium chloride solutions: effects of temperature and ionic strength. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 4193-4203. | 1.6 | 265 |
| 8 | Mechanisms of classical crystal growth theory explain quartz and silicate dissolution behavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 15357-15362. | 3.3 | 254 |
| 9 | The dissolution kinetics of quartz in aqueous mixed cation solutions. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 3715-3727. | 1.6 | 221 |
| 10 | Surface charge density on silica in alkali and alkaline earth chloride electrolyte solutions. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 4963-4970. | 1.6 | 202 |
| 11 | Dissolution rate of quartz in lead and sodium electrolyte solutions between 25 and 300°C: Effect of the nature of surface complexes and reaction affinity. <i>Geochimica Et Cosmochimica Acta</i> , 1994, 58, 541-551. | 1.6 | 197 |
| 12 | The influence of the alkaline earth cations, magnesium, calcium, and barium on the dissolution kinetics of quartz. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 3329-3340. | 1.6 | 192 |
| 13 | Kinetics of amorphous silica dissolution and the paradox of the silica polymorphs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 9903-9908. | 3.3 | 189 |
| 14 | Dissolution kinetics of quartz in sodium chloride solutions: Analysis of existing data and a rate model for 25°C. <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 4147-4156. | 1.6 | 181 |
| 15 | MATERIALS SCIENCE: Shaping Crystals with Biomolecules. <i>Science</i> , 2004, 306, 1301-1302. | 6.0 | 174 |
| 16 | Polysaccharide chemistry regulates kinetics of calcite nucleation through competition of interfacial energies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 9261-9266. | 3.3 | 173 |
| 17 | Carboxylated molecules regulate magnesium content of amorphous calcium carbonates during calcification. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 21511-21516. | 3.3 | 163 |
| 18 | Morphological consequences of differential Mg ²⁺ incorporation at structurally distinct steps on calcite. <i>American Mineralogist</i> , 2004, 89, 714-720. | 0.9 | 145 |

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|----|--|-----|-----------|
| 19 | Mineral/solution reaction rates in a mixed flow reactor: Wollastonite hydrolysis. <i>Geochimica Et Cosmochimica Acta</i> , 1986, 50, 2509-2516. | 1.6 | 141 |
| 20 | Kinetics of Silica Nucleation on Carboxyl- and Amine-Terminated Surfaces: Insights for Biomineralization. <i>Journal of the American Chemical Society</i> , 2009, 131, 5244-5250. | 6.6 | 128 |
| 21 | Reconciling disparate views of template-directed nucleation through measurement of calcite nucleation kinetics and binding energies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 1304-1309. | 3.3 | 122 |
| 22 | Crystal chemical controls on the dissolution kinetics of the isostructural sulfates: Celestite, anglesite, and barite. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 1907-1915. | 1.6 | 121 |
| 23 | Nanoscale effects of strontium on calcite growth: An in situ AFM study in the absence of vital effects. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 3017-3027. | 1.6 | 120 |
| 24 | Reversed calcite morphologies induced by microscopic growth kinetics: insight into biomineralization. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 2507-2512. | 1.6 | 113 |
| 25 | Compatible real-time rates of mineral dissolution by Atomic Force Microscopy (AFM). <i>Chemical Geology</i> , 1996, 127, 331-338. | 1.4 | 112 |
| 26 | Surface site-specific interactions of aspartate with calcite during dissolution; implications for biomineralization. <i>American Mineralogist</i> , 1997, 82, 878-887. | 0.9 | 109 |
| 27 | Microbially catalyzed dissolution of iron and aluminum oxyhydroxide mineral surface coatings. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 4467-4477. | 1.6 | 96 |
| 28 | Effects of temperature and transport conditions on calcite growth in the presence of Mg ²⁺ : Implications for paleothermometry. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 4227-4236. | 1.6 | 89 |
| 29 | Structural Development of Mercaptophenol Self-Assembled Monolayers and the Overlying Mineral Phase during Templated CaCO ₃ Crystallization from a Transient Amorphous Film. <i>Journal of the American Chemical Society</i> , 2007, 129, 10370-10381. | 6.6 | 89 |
| 30 | New insights into mechanisms of biomolecular control on growth of inorganic crystals. <i>CrystEngComm</i> , 2007, 9, 1144. | 1.3 | 77 |
| 31 | Geochemical controls on the kinetics of quartz fracture at subcritical tensile stresses. <i>Journal of Geophysical Research</i> , 1995, 100, 22349-22359. | 3.3 | 75 |
| 32 | Influence of Ion-Associated Water on the Hydrolysis of Si ⁴⁺ -O Bonded Interactions. <i>Journal of Physical Chemistry A</i> , 2010, 114, 2534-2542. | 1.1 | 65 |
| 33 | Title is missing!. <i>Aquatic Geochemistry</i> , 2001, 7, 13-32. | 1.5 | 64 |
| 34 | Raman spectroscopic characterization of the magnesium content in amorphous calcium carbonates. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 543-548. | 1.2 | 57 |
| 35 | Investigation of bacterial-mineral interactions using Fluid Tapping Mode [®] , Atomic Force Microscopy. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 2473-2480. | 1.6 | 55 |
| 36 | Isotopic tracer evidence for the amorphous calcium carbonate to calcite transformation by dissolution–reprecipitation. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 165, 407-417. | 1.6 | 51 |

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|----|---|-----|-----------|
| 37 | Molecular Dynamics of Ion Hydration in the Presence of Small Carboxylated Molecules and Implications for Calcification. <i>Journal of Physical Chemistry B</i> , 2010, 114, 10488-10495. | 1.2 | 48 |
| 38 | Nucleation on surfaces and in confinement. <i>MRS Bulletin</i> , 2016, 41, 388-392. | 1.7 | 32 |
| 39 | Metastable solubility and local structure of amorphous calcium carbonate (ACC). <i>Geochimica Et Cosmochimica Acta</i> , 2020, 289, 196-206. | 1.6 | 27 |
| 40 | A new method for <i>in situ</i> structural investigations of nano-sized amorphous and crystalline materials using mixed-flow reactors. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2019, 75, 758-765. | 0.0 | 21 |
| 41 | Nucleation Pathways in Electrolyte Solutions. , 2017, , 1-24. | | 14 |
| 42 | Systematic dependence of kinetic and thermodynamic barriers to homogeneous silica nucleation on NaCl and amino acids. <i>Journal of Materials Research</i> , 2019, 34, 442-455. | 1.2 | 13 |
| 43 | A Mixed Flow Reactor Method to Synthesize Amorphous Calcium Carbonate Under Controlled Chemical Conditions. <i>Methods in Enzymology</i> , 2013, 532, 557-568. | 0.4 | 10 |
| 44 | Resolving the Control of Magnesium on Calcite Growth: Thermodynamic and Kinetic Consequences of Impurity Incorporation for Biomineral Formation. <i>Materials Research Society Symposia Proceedings</i> , 2000, 620, 1. | 0.1 | 5 |
| 45 | Biologically Inspired Silicification Process for Improving Mechanical Properties of Sand. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2011, 137, 949-957. | 1.5 | 4 |
| 46 | Reply to Comment on "Kinetics of quartz dissolution in electrolyte solutions using a hydrothermal mixed flow reactor". <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 4093. | 1.6 | 1 |
| 47 | Molecular Dynamics of Cation Hydration in the Presence of Carboxylated Molecules: Implications for Calcification. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1301, 51. | 0.1 | 1 |
| 48 | Experimental creep behaviour and modelling of silicified sand. <i>Proceedings of the Institution of Civil Engineers: Ground Improvement</i> , 2013, 166, 115-124. | 0.7 | 1 |
| 49 | The Kinetics of Calcite Growth: Interpreting Chemical Affinity-Based Rate Laws Through the Lens of Direct Observation. <i>Materials Research Society Symposia Proceedings</i> , 2000, 620, 1. | 0.1 | 0 |