

Mark A Richards

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3302468/publications.pdf>

Version: 2024-02-01

43
papers

4,665
citations

159585

30
h-index

254184

43
g-index

45
all docs

45
docs citations

45
times ranked

2545
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Lower mantle heterogeneity, dynamic topography and the geoid. <i>Nature</i> , 1985, 313, 541-545. | 27.8 | 722 |
| 2 | Geoid anomalies in a dynamic Earth. <i>Journal of Geophysical Research</i> , 1984, 89, 5987-6002. | 3.3 | 593 |
| 3 | State shift in Deccan volcanism at the Cretaceous-Paleogene boundary, possibly induced by impact. <i>Science</i> , 2015, 350, 76-78. | 12.6 | 300 |
| 4 | Large-scale mantle convection and the history of subduction. <i>Nature</i> , 1992, 355, 437-440. | 27.8 | 291 |
| 5 | Effect of depth-dependent viscosity on the planform of mantle convection. <i>Nature</i> , 1996, 379, 436-438. | 27.8 | 278 |
| 6 | A sensitivity study of three-dimensional spherical mantle convection at 108 Rayleigh number: Effects of depth-dependent viscosity, heating mode, and an endothermic phase change. <i>Journal of Geophysical Research</i> , 1997, 102, 11991-12007. | 3.3 | 231 |
| 7 | Dynamically supported geoid highs over hotspots: Observation and theory. <i>Journal of Geophysical Research</i> , 1988, 93, 7690-7708. | 3.3 | 209 |
| 8 | Numerical investigations of the mantle plume initiation model for flood basalt events. <i>Journal of Geophysical Research</i> , 1994, 99, 13813-13833. | 3.3 | 201 |
| 9 | Role of a low-viscosity zone in stabilizing plate tectonics: Implications for comparative terrestrial planetology. <i>Geochemistry, Geophysics, Geosystems</i> , 2001, 2, n/a-n/a. | 2.5 | 185 |
| 10 | Triggering of the largest Deccan eruptions by the Chicxulub impact. <i>Bulletin of the Geological Society of America</i> , 2015, 127, 1507-1520. | 3.3 | 149 |
| 11 | Petrological models of magma evolution and deep crustal structure beneath hotspots and flood basalt provinces. <i>Earth and Planetary Science Letters</i> , 1996, 143, 81-94. | 4.4 | 124 |
| 12 | Cenozoic plate driving forces. <i>Geophysical Research Letters</i> , 1995, 22, 1317-1320. | 4.0 | 115 |
| 13 | The geoid constraint in global geodynamics: viscosity structure, mantle heterogeneity models and boundary conditions. <i>Geophysical Journal International</i> , 1997, 131, 1-8. | 2.4 | 95 |
| 14 | A dynamic model of Venus's gravity field. <i>Geophysical Research Letters</i> , 1986, 13, 14-17. | 4.0 | 90 |
| 15 | The origin of large scale structure in mantle convection: Effects of plate motions and viscosity stratification. <i>Geophysical Research Letters</i> , 1996, 23, 2987-2990. | 4.0 | 90 |
| 16 | The Relation between mantle dynamics and plate tectonics: A Primer. <i>Geophysical Monograph Series</i> , 2000, , 5-46. | 0.1 | 89 |
| 17 | Lithospheric structure and compensation mechanisms of the Galápagos Archipelago. <i>Journal of Geophysical Research</i> , 1994, 99, 6711. | 3.3 | 84 |
| 18 | A seismically induced onshore surge deposit at the KPg boundary, North Dakota. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 8190-8199. | 7.1 | 81 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | The fluid dynamics of plume-ridge and plume-plate interactions: An experimental investigation. <i>Earth and Planetary Science Letters</i> , 1995, 129, 171-182. | 4.4 | 69 |
| 20 | Deep crustal structure beneath large igneous provinces and the petrologic evolution of flood basalts. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, . | 2.5 | 64 |
| 21 | Tomography reveals buoyant asthenosphere accumulating beneath the Juan de Fuca plate. <i>Science</i> , 2016, 353, 1406-1408. | 12.6 | 58 |
| 22 | A conceptual model for the relationship between coronae and large-scale mantle dynamics on Venus. <i>Journal of Geophysical Research</i> , 2003, 108, . | 3.3 | 56 |
| 23 | On the resolution of radial viscosity structure in modelling long-wavelength postglacial rebound data. <i>Geophysical Journal International</i> , 2009, 179, 1516-1526. | 2.4 | 53 |
| 24 | Nazca–South America interactions and the late Eocene–late Oligocene flat-slab episode in the central Andes. <i>Tectonics</i> , 2012, 31, . | 2.8 | 49 |
| 25 | Differences in STEM doctoral publication by ethnicity, gender and academic field at a large public research university. <i>PLoS ONE</i> , 2017, 12, e0174296. | 2.5 | 47 |
| 26 | Mantle flow geometry from ridge to trench beneath the Gorda–Juan de Fuca plate system. <i>Nature Geoscience</i> , 2015, 8, 965-968. | 12.9 | 45 |
| 27 | On the evolution of large ultramafic magma chambers and timescales for flood basalt eruptions. <i>Journal of Geophysical Research</i> , 2011, 116, . | 3.3 | 38 |
| 28 | Petrological interpretation of deep crustal intrusive bodies beneath oceanic hotspot provinces. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 604-619. | 2.5 | 38 |
| 29 | A magmatic loading model for coronae on Venus. <i>Journal of Geophysical Research</i> , 2007, 112, . | 3.3 | 37 |
| 30 | The Cathles Parameter (C_t): A Geodynamic Definition of the Asthenosphere and Implications for the Nature of Plate Tectonics. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 4858-4875. | 2.5 | 37 |
| 31 | Effects of depth-dependent viscosity and plate motions on maintaining a relatively uniform mid-ocean ridge basalt reservoir in whole mantle flow. <i>Journal of Geophysical Research</i> , 2002, 107, ETG 5-1. | 3.3 | 25 |
| 32 | Volatile Degassing From Magma Chambers as a Control on Volcanic Eruptions. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 7869-7901. | 3.4 | 24 |
| 33 | Plume–ridge interaction via melt channelization at Galapagos and other near-ridge hotspot provinces. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1711-1738. | 2.5 | 20 |
| 34 | Prospecting for Jurassic slabs. <i>Nature</i> , 1999, 397, 203-204. | 27.8 | 15 |
| 35 | Rough versus smooth topography along oceanic hotspot tracks: Observations and scaling analysis. <i>Geophysical Research Letters</i> , 2017, 44, 4074-4081. | 4.0 | 12 |
| 36 | The Magmatic Architecture of Continental Flood Basalts I: Observations From the Deccan Traps. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021808. | 3.4 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | Emergence/Subsidence Histories Along the Carnegie and Cocos Ridges and Their Bearing Upon Biological Speciation in the Galápagos. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 4099-4129. | 2.5 | 9 |
| 38 | Seismic imaging of Deccan-related lava flows at the K-T boundary, deepwater west India. <i>The Leading Edge</i> , 2019, 38, 286-290. | 0.7 | 9 |
| 39 | Evidence and models for lower crustal flow beneath the Galápagos platform. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 113-142. | 2.5 | 6 |
| 40 | The Magmatic Architecture of Continental Flood Basalts: 2. A New Conceptual Model. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, . | 3.4 | 6 |
| 41 | Mantle convection and plate motion history: Toward general circulation models. <i>Geophysical Monograph Series</i> , 2000, , 289-307. | 0.1 | 4 |
| 42 | Elastic Flexure of Young, Overlapping Basaltic Lava Flows Offshore the Galápagos and Hawaiian Islands: Observations, Modeling, and Thermal/Chronological Analysis. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008864. | 2.5 | 2 |
| 43 | Introduction: Plate Tectonics and Mantle Convection Three Decades Later. <i>Geophysical Monograph Series</i> , 2000, , 1-4. | 0.1 | 1 |