# Matthew Steele-Macinnis

List of Publications by Year
in descending order

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|---|---|---|---|
| 69<br>papers | 2,229<br>citations | 236925<br>25<br>h-index | 233421<br>45<br>g-index |
| 74<br>all docs | 74<br>docs citations | 74<br>times ranked | 1912<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | HokieFlincs_H2O-NaCl : A Microsoft Excel spreadsheet for interpreting microthermometric data from fluid inclusions based on the PVTX properties of H 2 Oâ€“NaCl. Computers and Geosciences, 2012, 49, 334-337. | 4.2 | 279 |
| 2 | Numerical model to determine the composition of H2Oâ€“NaClâ€“CaCl2 fluid inclusions based on microthermometric and microanalytical data. Geochimica Et Cosmochimica Acta, 2011, 75, 21-40. | 3.9 | 178 |
| 3 | Bubbles matter: An assessment of the contribution of vapor bubbles to melt inclusion volatile budgets. American Mineralogist, 2015, 100, 806-823. | 1.9 | 175 |
| 4 | A numerical model to estimate trapping conditions of fluid inclusions that homogenize by halite disappearance. Geochimica Et Cosmochimica Acta, 2012, 92, 14-22. | 3.9 | 118 |
| 5 | Thermodynamic Model for the Effect of Post-entrapment Crystallization on the H2O-CO2 Systematics of Vapor-saturated, Silicate Melt Inclusions. Journal of Petrology, 2011, 52, 2461-2482. | 2.8 | 104 |
| 6 | Geothermobarometric history of subduction recorded by quartz inclusions in garnet. Geochemistry, Geophysics, Geosystems, 2014, 15, 350-360. | 2.5 | 74 |
| 7 | Calibration of zircon as a Raman spectroscopic pressure sensor to high temperatures and application to water-silicate melt systems. American Mineralogist, 2013, 98, 643-650. | 1.9 | 55 |
| 8 | Fluids associated with carbonatitic magmatism: A critical review and implications for carbonatite magma ascent. Earth-Science Reviews, 2021, 215, 103509. | 9.1 | 53 |
| 9 | Vibrational mode frequencies of silica species in SiO2-H2O liquids and glasses from ab initio molecular dynamics. Journal of Chemical Physics, 2012, 136, 154501. | 3.0 | 50 |
| 10 | Fluid inclusions in the system H2O-NaCl-CO2: An algorithm to determine composition, density and isochore. Chemical Geology, 2018, 498, 31-44. | 3.3 | 49 |
| 11 | Magma mixing and high fountaining during the 1959 KÄ«lauea Iki eruption, Hawaiâ€˜i. Earth and Planetary Science Letters, 2014, 400, 102-112. | 4.4 | 42 |
| 12 | The role of fluid phase immiscibility in quartz dissolution and precipitation in sub-seafloor hydrothermal systems. Earth and Planetary Science Letters, 2012, 321-322, 139-151. | 4.4 | 41 |
| 13 | Application of low-temperature microthermometric data for interpreting multicomponent fluid inclusion compositions. Earth-Science Reviews, 2016, 159, 14-35. | 9.1 | 41 |
| 14 | Multi-reservoir fluid mixing processes in rift-related hydrothermal veins, Schwarzwald, SW-Germany. Journal of Geochemical Exploration, 2018, 186, 158-186. | 3.2 | 40 |
| 15 | Formation of bedding-parallel, fibrous calcite veins in laminated source rocks of the Eocene Dongying Depression: A growth model based on petrographic observations. International Journal of Coal Geology, 2018, 200, 18-35. | 5.0 | 40 |
| 16 | Solubility and speciation of iron in hydrothermal fluids. Geochimica Et Cosmochimica Acta, 2019, 252, 126-143. | 3.9 | 38 |
| 17 | Direct evidence for fluid overpressure during hydrocarbon generation and expulsion from organic-rich shales. Geology, 2020, 48, 374-378. | 4.4 | 37 |
| 18 | Vibrational properties of silica species in MgOâ€“SiO2 glasses obtained from ab initio molecular dynamics. Chemical Geology, 2013, 346, 22-33. | 3.3 | 35 |

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|---|---|---|---|
| 19 | A fundamental role of carbonateâ€“sulfate melts in the formation of iron oxideâ€“apatite deposits. Nature Geoscience, 2020, 13, 751-757. | 12.9 | 35 |
| 20 | Detection of liquid H<sub>2</sub>O in vapor bubbles in reheated melt inclusions: Implications for magmatic fluid composition and volatile budgets of magmas?. American Mineralogist, 2016, 101, 1691-1695. | 1.9 | 32 |
| 21 | Quartz-in-garnet inclusion barometry under fire: Reducing uncertainty from model estimates. Geology, 2016, 44, 699-702. | 4.4 | 31 |
| 22 | Complex carbonate-sulfate brines in fluid inclusions from carbonatites: Estimating compositions in the system H2O-Na-K-CO3-SO4-Cl. Geochimica Et Cosmochimica Acta, 2020, 277, 224-242. | 3.9 | 31 |
| 23 | Sulfate brines in fluid inclusions of hydrothermal veins: Compositional determinations in the system H2O-Na-Ca-Cl-SO4. Geochimica Et Cosmochimica Acta, 2017, 209, 184-203. | 3.9 | 30 |
| 24 | Synthetic fluid inclusions XIX. Experimental determination of the vapor-saturated liquidus of the system H2Oâ€“NaClâ€“FeCl2. Geochimica Et Cosmochimica Acta, 2015, 148, 34-49. | 3.9 | 28 |
| 25 | The Alichur Dome, South Pamir, Western Indiaâ€“Asia Collisional Zone: Detailing the Neogene Shakhdaraâ€“Alichur Synâ€collisional Gneissâ€Dome Complex and Connection to Lithospheric Processes. Tectonics, 2020, 39, e2019TC005735. | 2.8 | 27 |
| 26 | Single-crystal hematite (Uâ€“Th)/He dates and fluid inclusions document widespread Cryogenian sand injection in crystalline basement. Earth and Planetary Science Letters, 2018, 500, 145-155. | 4.4 | 26 |
| 27 | Orogenic gold formation in an evolving, decompressing hydrothermal system: Genesis of the Samut gold deposit, Eastern Desert, Egypt. Ore Geology Reviews, 2019, 105, 236-257. | 2.7 | 25 |
| 28 | Phase equilibria, thermodynamic properties, and solubility of quartz in saline-aqueous-carbonic fluids: Application to orogenic and intrusion-related gold deposits. Geochimica Et Cosmochimica Acta, 2020, 283, 201-221. | 3.9 | 25 |
| 29 | Ion Association in Hydrothermal Sodium Sulfate Solutions Studied by Modulated FT-IR-Raman Spectroscopy and Molecular Dynamics. Journal of Physical Chemistry B, 2015, 119, 9847-9857. | 2.6 | 24 |
| 30 | Synthetic fluid inclusions XX. Critical PTx properties of H2Oâ€“FeCl2 fluids. Geochimica Et Cosmochimica Acta, 2015, 148, 50-61. | 3.9 | 23 |
| 31 | Evidence for iron-rich sulfate melt during magnetite(-apatite) mineralization at El Laco, Chile. Geology, 2021, 49, 1044-1048. | 4.4 | 22 |
| 32 | Heterogeneously entrapped, vapor-rich melt inclusions record pre-eruptive magmatic volatile contents. Contributions To Mineralogy and Petrology, 2017, 172, 1. | 3.1 | 21 |
| 33 | Fluid inclusion phase ratios, compositions and densities from ambient temperature to homogenization, based on PVTX properties of H2O NaCl. Earth-Science Reviews, 2019, 198, 102924. | 9.1 | 20 |
| 34 | Volumetrics of CO<sub>2</sub> Storage in Deep Saline Formations. Environmental Science & Technology, 2013, 47, 79-86. | 10.0 | 19 |
| 35 | Effect of the vapor phase on the salinity of halite-bearing aqueous fluid inclusions estimated from the halite dissolution temperature. Geochimica Et Cosmochimica Acta, 2013, 115, 205-216. | 3.9 | 19 |
| 36 | Seismic precursors linked to highly compressible fluids at oceanic transform faults. Nature Geoscience, 2014, 7, 757-761. | 12.9 | 19 |

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|---|---|---|---|
| 37 | Synthetic saline-aqueous and hydrocarbon fluid inclusions trapped in calcite at temperatures and pressures relevant to hydrocarbon basins: A reconnaissance study. Marine and Petroleum Geology, 2016, 76, 88-97. | 3.3 | 19 |
| 38 | A model for the solubility of minerals in saline aqueous fluids in the crust and upper mantle. Numerische Mathematik, 2019, 319, 754-787. | 1.4 | 19 |
| 39 | Shift in the Raman symmetric stretching band of N<sub>2</sub>, CO<sub>2</sub>, and CH<sub>4</sub> as a function of temperature, pressure, and density. Journal of Raman Spectroscopy, 2020, 51, 555-568. | 2.5 | 19 |
| 40 | Extreme fractionation and magmaticâ€“hydrothermal transition in the formation of the Abu Dabbab rare-metal granite, Eastern Desert, Egypt. Lithos, 2020, 352-353, 105329. | 1.4 | 18 |
| 41 | PVTX Properties of H2O-CO2-"salt" at PTX Conditions Applicable to Carbon Sequestration in Saline Formations. Reviews in Mineralogy and Geochemistry, 2013, 77, 123-152. | 4.8 | 17 |
| 42 | QuIB Calc: A MATLABÂ® script for geobarometry based on Raman spectroscopy and elastic modeling of quartz inclusions in garnet. Computers and Geosciences, 2014, 66, 155-157. | 4.2 | 17 |
| 43 | Coarse muscovite veins and alteration deep in the Yerington batholith, Nevada: insights into fluid exsolution in the roots of porphyry copper systems. Mineralium Deposita, 2017, 52, 463-470. | 4.1 | 17 |
| 44 | Relationship between Raman spectral features and fugacity in mixtures of gases. Journal of Raman Spectroscopy, 2018, 49, 581-593. | 2.5 | 17 |
| 45 | Vibrational mode frequencies of H4SiO4, D4SiO4, H6Si2O7, and H6Si3O9 in aqueous environment, obtained from ab initio molecular dynamics. Journal of Chemical Physics, 2012, 137, 164506. | 3.0 | 16 |
| 46 | Magmatic evolution of the Campi Flegrei and Procida volcanic fields, Italy, based on interpretation of data from well-constrained melt inclusions. Earth-Science Reviews, 2018, 185, 325-356. | 9.1 | 16 |
| 47 | Barometric constraints based on apatite inclusions in garnet. American Mineralogist, 2017, 102, 743-749. | 1.9 | 13 |
| 48 | Coarse muscovite veins and alteration in porphyry systems. Ore Geology Reviews, 2019, 113, 103045. | 2.7 | 13 |
| 49 | Silicate speciation in H2Oâ€“Na2Oâ€“SiO2 fluids from 3 to 40 mol% SiO2, to 600 Â°C and 2 GPa. Geochimica Et Cosmochimica Acta, 2014, 136, 126-141. | 3.9 | 11 |
| 50 | Pressures of skarn mineralization at Casting Copper, Nevada, USA, based on apatite inclusions in garnet. Geology, 2017, 45, 947-950. | 4.4 | 11 |
| 51 | Speciation and Structural Properties of Hydrothermal Solutions of Sodium and Potassium Sulfate Studied by Molecular Dynamics Simulations. ChemPhysChem, 2016, 17, 1446-1453. | 2.1 | 10 |
| 52 | Texture, trace elements, sulfur and He-Ar isotopes in pyrite: Implication for ore-forming processes and fluid source of the Guoluolongwa gold deposit, East Kunlun metallogenic belt. Ore Geology Reviews, 2021, 136, 104260. | 2.7 | 10 |
| 53 | Formation of hydrothermal fluorite-hematite veins by mixing of continental basement brine and redbed-derived fluid: Schwarzwald mining district, SW-Germany. Journal of Geochemical Exploration, 2020, 212, 106512. | 3.2 | 9 |
| 54 | Salt precipitation in magmatic-hydrothermal systems associated with upper crustal plutons. Geology, 0, , G37163.1. | 4.4 | 8 |

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| 55 | Sodic-Calcic Family of Alteration in Porphyry Systems of Arizona and Adjacent New Mexico. Economic Geology, 2019, 114, 745-770. | 3.8 | 8 |
| 56 | Synthetic Fluid Inclusions XXIV. In situ Monitoring of the Carbonation of Olivine Under Conditions Relevant to Carbon Capture and Storage Using Synthetic Fluid Inclusion Micro-Reactors: Determination of Reaction Rates. Frontiers in Climate, 2021, 3, . | 2.8 | 8 |
| 57 | Quartz precipitation and fluid inclusion characteristics in sub-seafloor hydrothermal systems associated with volcanogenic massive sulfide deposits. Open Geosciences, 2012, 4, 275-286. | 1.7 | 7 |
| 58 | Synthetic fluid inclusions XXII: Properties of H2O-NaClâ€Â±â€KCl fluid inclusions trapped under vapor- and salt-saturated conditions with emphasis on the effect of KCl on phase equilibria. Geochimica Et Cosmochimica Acta, 2020, 272, 78-92. | 3.9 | 6 |
| 59 | Seeking the most hydrous, primitive arc melts: The glass is half full. American Mineralogist, 2019, 104, 1217-1218. | 1.9 | 5 |
| 60 | Thermobarometry of Three Skarns in the Ludwig Area, Nevada, Based On Raman Spectroscopy and Elastic Modeling of Mineral Inclusions in Garnet. Canadian Mineralogist, 2019, 57, 25-45. | 1.0 | 5 |
| 61 | Fluid evolution of a hematite-dominated, magmatic-hydrothermal Cu-Au deposit at Qibaoshan, Shandong Province, China. Ore Geology Reviews, 2021, 131, 104052. | 2.7 | 4 |
| 62 | A comprehensive numerical model for the thermodynamic and transport properties of H2O-NaCl fluids. Chemical Geology, 2020, 557, 119840. | 3.3 | 4 |
| 63 | Mixing of brine with oil triggered sphalerite deposition at Pine Point, Northwest Territories, Canada. Geology, 2021, 49, 488-492. | 4.4 | 3 |
| 64 | Reply to the comment by R.J. Bakker on the paper â€œEffect of the vapor phase on the salinity of halite-bearing aqueous fluid inclusionsâ€•by M. Steele-MacInnis and R.J. Bodnar. Geochimica Et Cosmochimica Acta, 2014, 135, 354-358. | 3.9 | 2 |
| 65 | Neoproterozoic copper-gold mineralization in the Amani area, southwestern Tanzania. Ore Geology Reviews, 2021, 132, 104070. | 2.7 | 2 |
| 66 | Anhydrite replacement reaction in nodular pyrite breccia and its geochemical controls on the Î´34S signature of pyrite in the TAG hydrothermal mound, 26Â° N Mid Atlantic Ridge. Lithos, 2021, 400-401, 106357. | 1.4 | 2 |
| 67 | A model for the solubility of anhydrite in H2O-NaCl fluids from 25 to 800â€Â°C, 0.1 to 1400â€MPa, and 0 to 60â€wt% NaCl: Applications to hydrothermal ore-forming systems. Chemical Geology, 2022, 587, 120609. | 3.3 | 2 |
| 68 | Hydrothermal properties of the COS/D2 water model: a polarizable charge-on-spring water model, at elevated temperatures and pressures. RSC Advances, 2015, 5, 75846-75856. | 3.6 | 1 |
| 69 | An Occurrence of Phlogopite-rich Alteration in the Yerington District, Nevada. Canadian Mineralogist, 2019, 57, 271-294. | 1.0 | 0 |