Stephen Sutton

List of Publications by Year
in descending order

31 papers	1,370 citations	430874 18 h-index	454955 30 g-index
33 all docs	33 docs citations	33 times ranked	1474 citing authors

#	Article	IF	Citations
1	X-ray microprobe analysis of iron oxidation states in silicates and oxides using X-ray absorption near edge structure (XANES). Geochimica Et Cosmochimica Acta, 1994, 58, 5209-5214.	3.9	209
2	Vanadium K edge XANES of synthetic and natural basaltic glasses and application to microscale oxygen barometry. Geochimica Et Cosmochimica Acta, 2005, 69, 2333-2348.	3.9	148
3	Synchrotron x-ray microprobe determination of chromate content using x-ray absorption near-edge structure. Analytical Chemistry, 1993, 65, 1800-1804.	6.5	143
4	Reduced chromium in olivine grains from lunar basalt 15555: X-ray Absorption Near Edge Structure (XANES). Geochimica Et Cosmochimica Acta, 1993, 57, 461-468.	3.9	126
5	An experimental study of the oxidation state of vanadium in spinel and basaltic melt with implications for the origin of planetary basalt. American Mineralogist, 2006, 91, 1643-1656.	1.9	85
6	Microfluorescence and Microtomography Analyses of Heterogeneous Earth and Environmental Materials. Reviews in Mineralogy and Geochemistry, 2002, 49, 429-483.	4.8	79
7	Valence of titanium and vanadium in pyroxene in refractory inclusion interiors and rims. Geochimica Et Cosmochimica Acta, 2007, 71, 3098-3118.	3.9	66
8	Spatial and Temporal Variability of Arsenic Solid-State Speciation in Historically Lead Arsenate Contaminated Soils. Environmental Science & Technology, 2006, 40, 673-679.	10.0	63
9	Strontium heterogeneity and speciation in coral aragonite: implications for the strontium paleothermometer. Geochimica Et Cosmochimica Acta, 2001, 65, 2669-2676.	3.9	62
10	SYSTEMATICS IN THE STRUCTURE AND XANES SPECTRA OF PYROXENES, AMPHIBOLES, AND MICAS AS DERIVED FROM ORIENTED SINGLE CRYSTALS. Canadian Mineralogist, 2002, 40, 1375-1393.	1.0	49
11	Micro-beam X-ray absorption and fluorescence spectroscopies at GSECARS: APS beamline 13ID. Journal of Synchrotron Radiation, 1999, 6, 353-355.	2.4	42
12	XANES measurements of Cr valence in olivine and their applications to planetary basalts. American Mineralogist, 2014, 99, 1404-1412.	1.9	36
13	Redox systematics of martian magmas with implications for magnetite stability. American Mineralogist, 2013, 98, 616-628.	1.9	35
14	Chromium valences in ureilite olivine and implications for ureilite petrogenesis. Geochimica Et Cosmochimica Acta, 2013, 122, 280-305.	3.9	24
15	Valence state partitioning of Cr between pyroxene-melt: Effects of pyroxene and melt composition and direct determination of Cr valence states by XANES. Application to Martian basalt QUE 94201 composition. American Mineralogist, 2007, 92, 2002-2005.	1.9	22
16	Titanium, vanadium and chromium valences in silicates of ungrouped achondrite NWA 7325 and ureilite Y-791538 record highly-reduced origins. Geochimica Et Cosmochimica Acta, 2017, 204, 313-330.	3.9	22
17	Valence state partitioning of V between pyroxeneâ€melt: Effects of pyroxene and melt composition, and direct determination of V valence states by XANES. Application to Martian basalt QUE 94201 composition. Meteoritics and Planetary Science, 2008, 43, 1275-1285.	1.6	21
18	Partitioning of Eu between augite and a highly spiked martian basalt composition as a function of oxygen fugacity (IW-1 to QFM): Determination of Eu2+/Eu3+ ratios by XANES. American Mineralogist, 2010, 95, 410-413.	1.9	19

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19	The nature of Martian fluids based on mobile element studies in saltâ€assemblages from Martian meteorites. Journal of Geophysical Research, 2008, 113, .	3.3	17
20	Accurate predictions of microscale oxygen barometry in basaltic glasses using V K-edge X-ray absorption spectroscopy: A multivariate approach. American Mineralogist, 2018, 103, 1282-1297.	1.9	16
21	Vanadium, sulfur, and iron valences in melt inclusions as a window into magmatic processes: A case study at Nyamuragira volcano, Africa. Geochimica Et Cosmochimica Acta, 2018, 226, 149-173.	3.9	15
22	Direct measurements of copper speciation in basaltic glasses: understanding the relative roles of sulfur and oxygen in copper complexation in melts. Geochimica Et Cosmochimica Acta, 2019, 267, 164-178.	3.9	15
23	Oxybarometry and valence quantification based on microscale X-ray absorption fine structure (XAFS) spectroscopy of multivalent elements. Chemical Geology, 2020, 531, 119305.	3.3	15
24	<scp>XANES</scp> and <scp>M</scp>g isotopic analyses of spinels in <scp>C</scp>aâ€<scp>A</scp>lâ€rich inclusions: Evidence for formation under oxidizing conditions. Meteoritics and Planetary Science, 2013, 48, 2015-2043.	1.6	12
25	Isotopic evidence for a Martian regolith component in shergottite meteorites. Journal of Geophysical Research, 2011, 116, .	3.3	11
26	Signatures of the Martian regolith components entrained in some impactâ€melt glasses in shergottites. Meteoritics and Planetary Science, 2018, 53, 2558-2582.	1.6	6
27	Discrimination and quantification of Fe and Ni abundances in Genesis solar wind implanted collectors using X-ray standing wave fluorescence yield depth profiling with internal referencing. Chemical Geology, 2016, 441, 246-255.	3.3	5
28	Synchrotron x-Ray Spectroscopic Analysis. , 2014, , 213-230.		4
29	Radiation-Induced Changes in Vanadium Speciation in Basaltic Glasses: Implications for Oxybarometry Measurements Using Vanadium K-edge X-ray Absorption Spectroscopy. American Mineralogist, 2021, , .	1.9	1
30	Valence determinations and oxybarometry on FIBâ€sectioned olivine and pyroxene using correlated Ti, V, and Cr microâ€XAFS spectroscopy: Evaluation of ionâ€milling effects and application to Antarctic micrometeorite grains. Meteoritics and Planetary Science, 2020, 55, 2553-2569.	1.6	1
31	Shock experiments on basaltâ€"Ferric sulfate mixes and their possible relevance to the sulfide bleb clusters in large impact melts in shergottites. Meteoritics and Planetary Science, 2021, 56, 2250-2264.	1.6	1