Soghomon Boghosian

List of Publications by Year
in descending order

85 papers	2,922 citations	159585 30 h-index	175258 52 g-index
85 all docs	85 docs citations	85 times ranked	2782 citing authors

#	Article	IF	Citations
1	Ceria nanoparticles shape effects on the structural defects and surface chemistry: Implications in CO oxidation by Cu/CeO2 catalysts. Applied Catalysis B: Environmental, 2018, 230, 18-28.	20.2	359
2	Particle size effects on the reducibility of titanium dioxide and its relation to the waterâ€“gas shift activity of Pt/TiO2 catalysts. Journal of Catalysis, 2006, 240, 114-125.	6.2	245
3	Molecular structure and catalytic activity of V2O5/TiO2 catalysts for the SCR of NO by NH3: In situ Raman spectra in the presence of O2, NH3, NO, H2, H2O, and SO2. Journal of Catalysis, 2006, 239, 1-12.	6.2	174
4	Molecular structure and reactivity of vanadia-based catalysts for propane oxidative dehydrogenation studied by in situ Raman spectroscopy and catalytic activity measurements. Journal of Catalysis, 2004, 222, 293-306.	6.2	145
5	An operando Raman study of structure and reactivity of alumina-supported molybdenum oxide catalysts for the oxidative dehydrogenation of ethane. Journal of Catalysis, 2006, 242, 16-25.	6.2	99
6	Progress on the mechanistic understanding of SO2 oxidation catalysts. Catalysis Today, 1999, 51, 469-479.	4.4	92
7	Vanadia-based SCR catalysts supported on tungstated and sulfated zirconia: Influence of doping with potassium. Journal of Catalysis, 2007, 251, 459-473.	6.2	91
8	Support effects on structure and activity of molybdenum oxide catalysts for the oxidative dehydrogenation of ethane. Catalysis Today, 2007, 127, 139-147.	4.4	65
9	Structural and Redox Properties of Ce_{1â€“<i>x</i>}Zr_{<i>x</i>}O_{2âˆ'Î´} and Ce_{0.8}Zr_{0.15}RE_{0.05}O_{2âˆ'Î´} (RE: La, Nd, Pr, Y) Solids Studied by High Temperature <i>in Situ</i> Raman Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 7931-7943.	3.1	61
10	Selective catalytic reduction of NO with NH3 over mesoporous V2O5â€“TiO2â€“SiO2 catalysts. Journal of Catalysis, 2003, 217, 172-172.	6.2	60
11	On the configuration, molecular structure and vibrational properties of MoOx sites on alumina, zirconia, titania and silica. Catalysis Science and Technology, 2013, 3, 1869.	4.1	59
12	Oxide Complexes in Alkali--Alkaline-Earth Chloride Melts.. Acta Chemica Scandinavica, 1991, 45, 145-157.	0.7	59
13	Formation of crystalline compounds and catalyst deactivation during SO2 oxidation in V2O5$z.sbnd;M2S2O7 (M = Na, K, Cs) melts. Journal of Catalysis, 1989, 119, 121-134.	6.2	55
14	Propane oxidative dehydrogenation over vanadia catalysts supported on mesoporous silicas with varying pore structure and size. Catalysis Today, 2009, 141, 245-253.	4.4	51
15	Deactivation and Compound Formation in Sulfuric-Acid Catalysts and Model Systems. Journal of Catalysis, 1995, 155, 32-42.	6.2	50
16	Molecular structure and activity of molybdena catalysts supported on zirconia for ethane oxidative dehydrogenation studied by operando Raman spectroscopy. Journal of Catalysis, 2008, 260, 178-187.	6.2	49
17	Waterâ€“Gas Shift Reaction on Pt/Ce_{1â€“<i>x</i>}Ti_{<i>x</i>}O_{2âˆ'Î´}: The Effect of Ce/Ti Ratio. Journal of Physical Chemistry C, 2013, 117, 25467-25477.	3.1	48
18	Gold catalysts supported on Y-modified ceria for CO-free hydrogen production via PROX. Applied Catalysis B: Environmental, 2016, 188, 154-168.	20.2	47

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19	Cobalt oxide supported on alumina catalysts prepared by various methods for use in catalytic afterburner of PEM fuel cell. Catalysis Today, 2009, 143, 38-44.	4.4	46
20	In Situ Raman and FTIR Spectroscopy of Molybdenum(VI) Oxide Supported on Titania Combined with ¹⁸O/¹⁶O Exchange: Molecular Structure, Vibrational Properties, and Vibrational Isotope Effects. Journal of Physical Chemistry C, 2011, 115, 2146-2154.	3.1	42
21	Glass-forming ability of TeO2 and temperature induced changes on the structure of the glassy, supercooled, and molten states. Journal of Chemical Physics, 2015, 142, 154503.	3.0	40
22	Evaluation of stoichiometric coefficients and thermodynamic functions of vapor complexes using Raman spectroscopy: the systems ZrX4-AlX3 (X = Br, Cl). The Journal of Physical Chemistry, 1989, 93, 415-421.	2.9	39
23	Synthesis, Crystal Structure Redetermination and Vibrational Spectra of beta-VOSO4.. Acta Chemica Scandinavica, 1995, 49, 703-708.	0.7	37
24	Crystal structure and infrared and Raman spectra of potassium vanadyl sulfate (K4(VO)3(SO4)5). Inorganic Chemistry, 1989, 28, 1847-1853.	4.0	33
25	Vanadium (V) complexes in molten salts of interest for the catalytic oxidation of sulphur dioxide. Catalysis Letters, 1997, 48, 145-150.	2.6	32
26	An operando Raman study of molecular structure and reactivity of molybdenum(vi) oxide supported on anatase for the oxidative dehydrogenation of ethane. Physical Chemistry Chemical Physics, 2012, 14, 2216-2228.	2.8	32
27	Distribution of tellurite polymorphs in the xM2Oâ€“(1â^’x)TeO2 (M=Li, Na, K, Cs, and Rb) binary glasses using Raman spectroscopy. Vibrational Spectroscopy, 2012, 59, 18-22.	2.2	32
28	Interfacial Impregnation Chemistry in the Synthesis of Molybdenum Catalysts Supported on Titania. Journal of Physical Chemistry C, 2010, 114, 11868-11879.	3.1	31
29	Crystal structure and spectroscopic characterization of cesium vanadium sulfate CsV(SO4)2. Evidence for an electronic Raman transition. Inorganic Chemistry, 1993, 32, 4714-4720.	4.0	30
30	Synthesis and Crystal Structure of Na3V(SO4)3. Spectroscopic Characterization of Na3V(SO4)3 and NaV(SO4)2.. Acta Chemica Scandinavica, 1994, 48, 724-731.	0.7	30
31	Conductivity and Phase-Diagram of the SO2 Oxidation Catalyst Model System: M2S2O7-V2O5 (M=80% K) Tj ETQq1 1 0.784314 rgBT /O	6.2	25
32	Catalytic Activity and Deactivation of SO2Oxidation Catalysts in Simulated Power Plant Flue Gases. Journal of Catalysis, 1997, 166, 16-24.	6.2	25
33	Structure of Vanadium Oxosulfato Complexes in V2O5â^'M2S2O7â^'M2SO4 (M = K, Cs) Melts. A High Temperature Spectroscopic Study. Journal of Physical Chemistry B, 2002, 106, 49-56.	2.6	25
34	First In Situ Raman Study of Vanadium Oxide Based SO2 Oxidation Supported Molten Salt Catalysts. Catalysis Letters, 2002, 78, 209-214.	2.6	24
35	Crystal Structure and Spectroscopic Characterization of a Green V(IV) Compound, Na8(VO)2(SO4)6.. Acta Chemica Scandinavica, 1999, 53, 15-23.	0.7	24
36	Vibrational dephasing and frequency shifts of hydrogen-bonded pyridineâ€“water complexes. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2015, 135, 31-38.	3.9	23

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37	The Crystal Structure of NaV(SO4)2.. Acta Chemica Scandinavica, 1991, 45, 961-964.	0.7	23
38	Crystal structure and vibrational spectra of disodium oxo(disulfato)vanadate. Inorganic Chemistry, 1990, 29, 3294-3298.	4.0	22
39	Vibrational modes and structure of vanadium(V) complexes in M2SO4â€“V2O5 (M=K or Cs) molten salt mixtures. Journal of the Chemical Society, Faraday Transactions, 1998, 94, 3463-3469.	1.7	22
40	Thermal Dissociation of Molten KHSO₄: Temperature Dependence of Raman Spectra and Thermodynamics. Journal of Physical Chemistry B, 2008, 112, 11996-12000.	2.6	22
41	Crystal Structure and Spectroscopic Properties of CsVO2SO4. Inorganic Chemistry, 2004, 43, 3697-3701.	4.0	21
42	In situ high temperature SERS study of Ag catalysts and electrodes during ethylene epoxidation. Journal of Catalysis, 1989, 117, 561-565.	6.2	20
43	A Novel Analysis of Transient Isothermal 18O Isotopic Exchange on Commercial CexZr1âˆ’xO2-Based OSC Materials. Topics in Catalysis, 2019, 62, 219-226.	2.8	20
44	Dynamics and vibrational coupling of methyl acetate dissolved in ethanol. Chemical Physics, 2019, 522, 1-9.	1.9	19
45	Structural and vibrational properties of molybdena catalysts supported on alumina and zirconia studied by in situ Raman and FTIR spectroscopies combined with 18O/16O isotopic substitution. Catalysis Today, 2010, 158, 146-155.	4.4	18
46	Temperature-Dependent Evolution of the Molecular Configuration of Oxo-Tungsten(VI) Species Deposited on the Surface of Titania. Journal of Physical Chemistry C, 2014, 118, 11319-11332.	3.1	18
47	Low-temperature waterâ€“gas shift on Pt/Ce0.5La0.5O2âˆ’Î´: Effect of support synthesis method. Catalysis Today, 2015, 242, 153-167.	4.4	18
48	Molybdena deposited on titania by equilibrium deposition filtration: structural evolution of oxoâ€“molybdenum(<scp>vi</scp>) sites with temperature. Physical Chemistry Chemical Physics, 2016, 18, 23980-23989.	2.8	17
49	Proton-transfer in 1,1,3,3 tetramethyl guanidine by means of ultrasonic relaxation and Raman spectroscopies and molecular orbital calculations. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 229, 117958.	3.9	17
50	Chapter 157 Halide vapors and vapor complexes. Fundamental Theories of Physics, 1996, 23, 435-496.	0.3	16
51	Vaporization and vapor complexation in the gold(III) chloride-aluminum(III) chloride system. Inorganic Chemistry, 1992, 31, 1769-1773.	4.0	15
52	Crystal Structure and Spectroscopic Properties of Na2K6(VO)2(SO4)7. Inorganic Chemistry, 2002, 41, 2417-2421.	4.0	15
53	Raman Spectroscopic Study of Tungsten(VI) Oxosulfato Complexes in WO₃âˆ’K₂S₂O₇âˆ’K₂SO₄ Molten Mixtures: Stoichiometry, Vibrational Properties, and Molecular Structure. Journal of Physical Chemistry A, 2011, 115, 4214-4222.	2.5	14
54	Molybdenum(VI) Oxosulfato Complexes in MoO3â€“K2S2O7â€“K2SO4 Molten Mixtures: Stoichiometry, Vibrational Properties, and Molecular Structures. Journal of Physical Chemistry A, 2012, 116, 8861-8872.	2.5	14

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55	Raman spectroscopic studies of vapor complexation in the MCl4-POCl3 and MCl4-AlCl3 (M = Zr or Hf) binary systems. Polyhedron, 1986, 5, 1393-1403.	2.2	13
56	Characterization of vapour complexes over molten POCl3-MCl3 (M = Al, Ga) mixtures: Raman spectra and thermodynamics. Polyhedron, 1993, 12, 771-782.	2.2	13
57	Vanadia?silica and vanadia?cesium?silica catalysts for oxidation of SO2. Journal of Catalysis, 2004, 225, 24-36.	6.2	13
58	Raman spectra of liquids and glasses in the RCl3î—¸AlCl3 (Rî—»Nd, Gd) systems. Journal of Non-Crystalline Solids, 1994, 180, 88-90.	3.1	12
59	Determination of Stoichiometry of Solutes in Molten Salt Solvents by Correlations of Relative Raman Band Intensities. Applied Spectroscopy, 1999, 53, 565-571.	2.2	12
60	NO reduction with NH3 over chromiaâ€“vanadia catalysts supported on TiO2: an in situ Raman spectroscopic study. Catalysis Today, 2002, 73, 255-262.	4.4	12
61	Establishing the gas phase dimerization of niobium(V) fluoride and tantalum(V) fluoride by quantitative Raman spectroscopy. Vibrational Spectroscopy, 2005, 37, 133-139.	2.2	12
62	Liquid phase dynamics of molten M2S2O7 (M=K, Cs): A temperature dependent Raman spectroscopic study. Vibrational Spectroscopy, 2013, 65, 66-73.	2.2	12
63	Unraveling the role of microenvironment and hydrodynamic forces on the vibrational relaxation rates of pyridineâ€“water complexes. Journal of Molecular Liquids, 2014, 198, 299-306.	4.9	11
64	Heterogeneity of deposited phases in supported transition metal oxide catalysts: reversible temperature-dependent evolution of molecular structures and configurations. Physical Chemistry Chemical Physics, 2018, 20, 1742-1751.	2.8	10
65	Tuning the configuration of dispersed oxometallic sites in supported transition metal oxide catalysts: A temperature dependent Raman study. Catalysis Today, 2019, 336, 74-83.	4.4	10
66	Short-time microscopic dynamics of aqueous methanol solutions. Molecular Physics, 2012, 110, 3095-3102.	1.7	9
67	In Situ Raman Spectroscopy as a Tool for Discerning Subtle Structural Differences between Commercial (Ce,Zr)O2-Based OSC Materials of Identical Composition. Catalysts, 2020, 10, 462.	3.5	9
68	Stoichiometry, Vibrational Modes, and Structure of Niobium(V) Oxosulfato Complexes in the Molten Nb₂O₅âˆ’K₂S₂O₇âˆ’K₂SO₄ System Studied by Raman Spectroscopy. Journal of Physical Chemistry A, 2010, 114, 7485-7493.	2.5	8
69	Vapour complexation and thermochemistry over NaI-TbI3 mixtures: a mass spectrometric investigation. Polyhedron, 1994, 13, 1639-1646.	2.2	7
70	Temperature â€“ dependent evolution of molecular configurations of oxomolybdenum species on MoO3/TiO2 catalysts monitored by in situ Raman spectroscopy. Studies in Surface Science and Catalysis, 2010, 175, 613-616.	1.5	6
71	Molecular structure and termination configuration of Oxo-Re(VII) catalyst sites supported on Titania. Catalysis Today, 2020, 355, 665-677.	4.4	6
72	Molecular structure and reactivity of titania-supported transition metal oxide catalysts synthesized by equilibrium deposition filtration for the oxidative dehydrogenation of ethane. Comptes Rendus Chimie, 2016, 19, 1226-1236.	0.5	5

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73	Rhenium(III) chloride vaporisation and vapor complexation in the rhenium(III) chlorideâ€“aluminium(III) chloride systemElectronic Supplementary Information available. See http://www.rsc.org/suppdata/cp/b1/b106326j/. Physical Chemistry Chemical Physics, 2001, 3, 5208-5212.	2.8	4
74	Structural characterization and catalytic properties of bis(1,1,3,3-tetramethylguanidinium) dichromate. Polyhedron, 2011, 30, 785-789.	2.2	4
75	Di-oxo and tri-oxo Re(VII)-oxosulfato complexes in the Re2O7-K2S2O7 molten system. Molecular structure, vibrational properties and temperature-dependent interconversion. Vibrational Spectroscopy, 2019, 100, 14-21.	2.2	4
76	Advanced Synthesis and Characterization of Vanadia/Titania Catalysts through a Molecular Approach. Catalysts, 2021, 11, 322.	3.5	4
77	Rethinking the molecular structures of W^{VI}O_{<i>x</i>} sites dispersed on titania: distinct mono-oxo configurations at 430 Â°C and temperature-dependent transformations. Dalton Transactions, 2022, 51, 7455-7475.	3.3	4
78	Raman spectroscopic characterization of high temperature MGaCl8 (M = Nb, Ta) dinuclear molecular complexes in the liquid and gaseous state. Polyhedron, 1993, 12, 2965-2971.	2.2	3
79	Electrochemical and Spectroscopic Investigations of the â€‰Kâ€‰2â€‰SOâ€‰4â€‰â€â€‰â€‰Vâ€‰2â€‰Oâ€‰5 Molten El the Electrochemical Society, 1999, 146, 1060-1068.	2.9	3
80	Oxidation of sulfur dioxide over supported solid V2O5/SiO2 and supported molten salt V2O5?Cs2SO4/SiO2 catalysts: molecular structure and reactivity. Journal of Catalysis, 2004, 225, 337-337.	6.2	2
81	Dinuclear complex formation in TaCl5â€“AlCl3 molten mixtures: Vibrational modes and thermodynamics. Vibrational Spectroscopy, 2009, 49, 258-264.	2.2	2
82	Molten and glassy tellurium(IV) oxosulfato complexes in the TeO 2 â€“K 2 S 2 O 7 system studied by Raman spectroscopy: Stoichiometry, vibrational properties and molecular structure. Vibrational Spectroscopy, 2018, 97, 85-90.	2.2	2
83	CoCl+: Unique in all of molten saltdom?. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 597-602.	2.1	0
84	SO2 and NOx emission abatement. Green Chemistry, 2000, 2, G26-G27.	9.0	0
85	Thermodynamic Analysis of Reaction Equilibria in Ionic and Molecular Liquid Systems by High-Temperature Raman Spectroscopy. Applied Spectroscopy, 2009, 63, 1050-1056.	2.2	0