

Gyrgy Vank

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101 papers	4,599 citations	37 h-index	67 g-index
106 ext. papers	4,987 ext. citations	5.9 avg, IF	5.05 L-index

#	Paper	IF	Citations
101	Site-Selective Real-Time Observation of Bimolecular Electron Transfer in a Photocatalytic System Using L-Edge X-Ray Absorption Spectroscopy*. <i>ChemPhysChem</i> , 2021 , 22, 693-700	3.2	3
100	Vibrational wavepacket dynamics in Fe carbene photosensitizer determined with femtosecond X-ray emission and scattering. <i>Nature Communications</i> , 2020 , 11, 634	17.4	41
99	Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy. <i>Angewandte Chemie</i> , 2020 , 132, 372-380	3.6	12
98	Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 364-372	16.4	28
97	Quantum-chemistry-aided ligand engineering for potential molecular switches: changing barriers to tune excited state lifetimes. <i>Chemical Communications</i> , 2020 , 56, 11831-11834	5.8	0
96	Tracking multiple components of a nuclear wavepacket in photoexcited Cu(I)-phenanthroline complex using ultrafast X-ray spectroscopy. <i>Nature Communications</i> , 2019 , 10, 3606	17.4	37
95	Combining X-ray K β , valence-to-core, and X-ray Raman spectroscopy for studying Earth materials at high pressure and temperature: the case of siderite. <i>Journal of Analytical Atomic Spectrometry</i> , 2019 , 34, 384-393	3.7	7
94	Finding intersections between electronic excited state potential energy surfaces with simultaneous ultrafast X-ray scattering and spectroscopy. <i>Chemical Science</i> , 2019 , 10, 5749-5760	9.4	54
93	Laboratory EXAFS determined structure of the stable complexes in the ternary Ni(II)-EDTA-CN system. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 9239-9245	3.6	4
92	Using Ultrafast X-ray Spectroscopy To Address Questions in Ligand-Field Theory: The Excited State Spin and Structure of [Fe(dcpp)]. <i>Inorganic Chemistry</i> , 2019 , 58, 9341-9350	5.1	18
91	Elucidation of the photoaquation reaction mechanism in ferrous hexacyanide using synchrotron x-rays with sub-pulse-duration sensitivity. <i>Journal of Chemical Physics</i> , 2019 , 151, 144306	3.9	9
90	Solvent control of charge transfer excited state relaxation pathways in [Fe(2,2'-bipyridine)(CN)]. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 4238-4249	3.6	41
89	Spectroscopic techniques to characterize the spin state: Vibrational, optical, Mössbauer, NMR, and X-ray spectroscopy. <i>Comptes Rendus Chimie</i> , 2018 , 21, 1152-1169	2.7	15
88	Probing Transient Valence Orbital Changes with Picosecond Valence-to-Core X-ray Emission Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 2620-2626	3.8	19
87	Simultaneous Speciation, Structure, and Equilibrium Constant Determination in the Ni-EDTA-CN Ternary System via High-Resolution Laboratory X-ray Absorption Fine Structure Spectroscopy and Theoretical Calculations. <i>Inorganic Chemistry</i> , 2017 , 56, 14220-14226	5.1	6
86	Femtosecond X-Ray Scattering Study of Ultrafast Photoinduced Structural Dynamics in Solvated [Co(terpy) ₂] ²⁺ . <i>Physical Review Letters</i> , 2016 , 117, 013002	7.4	65
85	Observing Solvation Dynamics with Simultaneous Femtosecond X-ray Emission Spectroscopy and X-ray Scattering. <i>Journal of Physical Chemistry B</i> , 2016 , 120, 1158-68	3.4	70

84	Laboratory von Hños X-ray spectroscopy for routine sample characterization. <i>Review of Scientific Instruments</i> , 2016 , 87, 103105	1.7	45
83	High-Efficiency Iron Photosensitizer Explained with Quantum Wavepacket Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 2009-14	6.4	49
82	Probing spin-vibronic dynamics using femtosecond X-ray spectroscopy. <i>Faraday Discussions</i> , 2016 , 194, 731-746	3.6	15
81	Detailed Characterization of a Nanosecond-Lived Excited State: X-ray and Theoretical Investigation of the Quintet State in Photoexcited [Fe(terpy)]. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 5888-5902	3.8	62
80	Visualizing the non-equilibrium dynamics of photoinduced intramolecular electron transfer with femtosecond X-ray pulses. <i>Nature Communications</i> , 2015 , 6, 6359	17.4	120
79	Feasibility of Valence-to-Core X-ray Emission Spectroscopy for Tracking Transient Species. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 14571-14578	3.8	31
78	Tracking excited-state charge and spin dynamics in iron coordination complexes. <i>Nature</i> , 2014 , 509, 345-348	30.4	319
77	Exceptional Excited-State Lifetime of an Iron(II)-N-Heterocyclic Carbene Complex Explained. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 2066-71	6.4	110
76	Solvation dynamics monitored by combined X-ray spectroscopies and scattering: photoinduced spin transition in aqueous [Fe(bpy) ₃](2+). <i>Faraday Discussions</i> , 2014 , 171, 169-78	3.6	14
75	Channelling study of La _{1-x} Sr _x CoO ₃ films on different substrates. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 332, 393-396	1.2	
74	Microscopic origin of the magnetoelectronic phase separation in Sr-doped LaCoO ₃ . <i>Physical Review B</i> , 2013 , 88,	3.3	9
73	On the sensitivity of hard X-ray spectroscopies to the chemical state of Br. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 11088-98	3.6	8
72	On Predicting Mössbauer Parameters of Iron-Containing Molecules with Density-Functional Theory. <i>Journal of Chemical Theory and Computation</i> , 2013 , 9, 5004-5020	6.4	54
71	Spin-state studies with XES and RIXS: From static to ultrafast. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013 , 188, 166-171	1.7	74
70	Toward Highlighting the Ultrafast Electron Transfer Dynamics at the Optically Dark Sites of Photocatalysts. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 1972-6	6.4	46
69	Temperature-Dependent 1s2p Resonant Inelastic X-ray Scattering of CoO. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 2976-2981	3.8	7
68	Theoretical Investigation of the Electronic Structure of Fe(II) Complexes at Spin-State Transitions. <i>Journal of Chemical Theory and Computation</i> , 2013 , 9, 509-519	6.4	72
67	Guest-host interactions investigated by time-resolved X-ray spectroscopies and scattering at MHz rates: solvation dynamics and photoinduced spin transition in aqueous Fe(bipy) ₃ (2+). <i>Journal of Physical Chemistry A</i> , 2012 , 116, 9878-87	2.8	101

66	Hard-X-ray-Induced Thermal Hysteresis (HAXITH) in a Molecular Switchable Solid. <i>European Journal of Inorganic Chemistry</i> , 2012 , 2012, 2653-2655	2.3	7
65	Switching reciprocity on and off in a magneto-optical x-ray scattering experiment using nuclear resonance of ^{57}Fe foils. <i>Physical Review Letters</i> , 2012 , 109, 237402	7.4	3
64	Screening in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ at large wave vectors. <i>Physical Review B</i> , 2010 , 82,	3.3	8
63	Angular dependence of core hole screening in LiCoO_2 : A DFT+U calculation of the oxygen and cobalt K-edge x-ray absorption spectra. <i>Physical Review B</i> , 2010 , 81,	3.3	78
62	Picosecond Time-Resolved X-Ray Emission Spectroscopy: Ultrafast Spin-State Determination in an Iron Complex. <i>Angewandte Chemie</i> , 2010 , 122, 6046-6048	3.6	7
61	Picosecond time-resolved X-ray emission spectroscopy: ultrafast spin-state determination in an iron complex. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 5910-2	16.4	95
60	The 1s x-ray absorption pre-edge structures in transition metal oxides. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 104207	1.8	184
59	Multiple-element spectrometer for non-resonant inelastic X-ray spectroscopy of electronic excitations. <i>Journal of Synchrotron Radiation</i> , 2009 , 16, 469-76	2.4	102
58	A study of core and valence levels in PbO_2 by hard X-ray photoemission. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2009 , 169, 26-34	1.7	32
57	Cu K α resonant x-ray emission spectroscopy of high-Tc-related cuprates. <i>Physical Review B</i> , 2008 , 77,	3.3	7
56	Crystal-field excitations in NiO studied with hard x-ray resonant inelastic x-ray scattering at the Ni K edge. <i>Physical Review B</i> , 2008 , 78,	3.3	39
55	X-ray Raman spectroscopic study of water in the condensed phases. <i>Physical Review Letters</i> , 2008 , 100, 095502	7.4	80
54	Intermediate-spin ferrous iron in lowermost mantle post-perovskite and perovskite. <i>Nature Geoscience</i> , 2008 , 1, 688-691	18.3	124
53	Hard-X-ray-induced excited-spin-state trapping. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 5306-9	16.4	60
52	Induktion langlebiger angeregter Spinzustände durch harte Röntgenstrahlung. <i>Angewandte Chemie</i> , 2007 , 119, 5400-5403	3.6	19
51	Spin transition zone in Earth's lower mantle. <i>Science</i> , 2007 , 317, 1740-3	33.3	167
50	Comment on Spin crossover in $(\text{Mg,Fe})\text{O}$: A Mössbauer effect study with an alternative interpretation of x-ray emission spectroscopy data. <i>Physical Review B</i> , 2007 , 75,	3.3	13
49	Metal-ligand interplay in strongly correlated oxides: a parametrized phase diagram for pressure-induced spin transitions. <i>Physical Review Letters</i> , 2007 , 98, 196404	7.4	34

48	Polarized resonant inelastic x-ray scattering as an ultrafine probe of excited States of La ₂ CuO ₄ . <i>Physical Review Letters</i> , 2006 , 96, 077006	7.4	31
47	Probing the 3d spin momentum with X-ray emission spectroscopy: the case of molecular-spin transitions. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 11647-53	3.4	231
46	Low-energy excitations in Na _x CoO ₂ ·yH ₂ O: Experiments and simulation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 246, 165-169	1.2	1
45	Temperature- and pressure-induced spin-state transitions in LaCoO ₃ . <i>Physical Review B</i> , 2006 , 73,	3.3	148
44	Quantifying the effective attenuation length in high-energy photoemission experiments. <i>Physical Review B</i> , 2005 , 71,	3.3	74
43	Nuclear resonant scattering evidence of the phase co-existence during structural phase transformation in [Fe(H ₂ O) ₆](ClO ₄) ₂ . <i>Journal of Alloys and Compounds</i> , 2005 , 401, 29-33	5.7	1
42	X-ray Raman scattering at the Si LII,III-edge of bulk amorphous SiO. <i>Journal of Physics and Chemistry of Solids</i> , 2005 , 66, 2277-2280	3.9	13
41	Advances in crystal analyzers for inelastic X-ray scattering. <i>Journal of Physics and Chemistry of Solids</i> , 2005 , 66, 2299-2305	3.9	49
40	Combining coordination chemistry with hydrogen bonds: perturbation of the structures by interaction of an organotin(IV) complex with O-donor solvent molecules. <i>Inorganica Chimica Acta</i> , 2005 , 358, 1012-1018	2.7	4
39	Improving the performance of high-resolution X-ray spectrometers with position-sensitive pixel detectors. <i>Journal of Synchrotron Radiation</i> , 2005 , 12, 467-72	2.4	83
38	Electronic properties of transition-metal oxides under high pressure revealed by x-ray emission spectroscopy. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S717-S726	1.8	43
37	Intermediate valence behaviour under pressure: how precisely can we probe it by means of resonant inelastic x-ray emission?. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S849-S858	1.8	9
36	X-ray Raman scattering at the L edges of elemental Na, Si, and the N edge of Ba in Ba ₈ Si ₄₆ . <i>Physical Review B</i> , 2005 , 72,	3.3	33
35	Electronic transitions in perovskite: possible nonconvecting layers in the lower mantle. <i>Science</i> , 2004 , 305, 383-6	33.3	325
34	Organotin(IV) complexes of polyhydroxyalkyl carboxylic acids and some related ligands. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2004 , 260, 459-469	1.5	13
33	Valence changes in YbAl ₂ under pressure: a resonant inelastic X-ray emission study. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004 , 137-140, 651-655	1.7	7
32	Evolution of Fe species during the synthesis of over-exchanged Fe/ZSM5 obtained by chemical vapor deposition of FeCl ₃ . <i>Journal of Catalysis</i> , 2003 , 213, 251-271	7.3	136
31	Iron partitioning in Earth's mantle: toward a deep lower mantle discontinuity. <i>Science</i> , 2003 , 300, 789-91	33.3	422

30	Charge transfer at very high pressure in NiO. <i>Physical Review B</i> , 2003 , 67,	3.3	36
29	Truly bulk-sensitive spectroscopic measurements of valence in heavy fermion materials. <i>Journal of Synchrotron Radiation</i> , 2002 , 9, 242-5	2.4	3
28	Investigations on Structure and Transformation of Some Organometallic Compounds in Solution. <i>Hyperfine Interactions</i> , 2002 , 144/145, 231-238	0.8	2
27	Nanostructure of Vapor-Deposited ⁵⁷ Fe Thin Films. <i>Langmuir</i> , 2002 , 18, 1206-1210	4	6
26	Potentiometric and spectroscopic studies on the dimethyltin(IV) complexes of 2-hydroxyhippuric acid. <i>Journal of Inorganic Biochemistry</i> , 2001 , 83, 187-92	4.2	17
25	Ferrocenediyl-Bridged Triiron Complexes <i>Organometallics</i> , 2001 , 20, 2198-2206	3.8	3
24	Study on Ferrocenes, Part 7. E-2-Ferrocenemethylene-1-benzocyclophanones. Synthesis, stereostructure, NMR, IR X-ray, and Mössbauer spectroscopic investigation. <i>Journal of Molecular Structure</i> , 2000 , 524, 297-304	3.4	6
23	Zeolite supported SnPb catalysts prepared by surface reactions. <i>Journal of Molecular Catalysis A</i> , 2000 , 162, 209-226		5
22	Nuclear Techniques in the Elucidation of Chemical Structure. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2000 , 243, 241-253	1.5	2
21	Nuclear Inelastic Scattering of Synchrotron Radiation on Solutions of ⁵⁷ Fe Complexes. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2000 , 246, 97-100	1.5	2
20	Sterical effects of encapsulation on some cobalt complexes built up in zeolite Y [A Mössbauer emission spectroscopy study 2000 , 126, 163-167		3
19	Characterization of SnPb/SiO ₂ Catalysts Used in Selective Hydrogenation of Crotonaldehyde by Mössbauer Spectroscopy. <i>Journal of Catalysis</i> , 2000 , 190, 474-477	7.3	58
18	Preparation and characterization of homoleptic and ethoxy-bridged nitronato iron(III) complexes. <i>Chemical Communications</i> , 2000 , 469-570	5.8	7
17	Dimethyltin(IV) cation induced amide deprotonation of aspartic acid containing dipeptides. <i>Dalton Transactions RSC</i> , 2000 , 1941-1947		23
16	Effect of praseodymium on the lattice dynamics and electronic structure of the Cu(1)-O(4) chain in Y _{1-x} Pr _x Ba ₂ Cu ₃ O ₇ <i>Physical Review B</i> , 1999 , 59, 11596-11604	3.3	9
15	Mössbauer and FTIR spectroscopic studies of iron anthranilates: coordination, structure and some ecological aspects of iron complexation. <i>Journal of Molecular Structure</i> , 1999 , 482-483, 703-711	3.4	18
14	Positronium as a tool to monitor changes of chemical structure. <i>Radiation Physics and Chemistry</i> , 1999 , 55, 541-548	2.5	12
13	On the Oximine Complexes of Transition Metals: Part 110: Spectroscopic and DSC study on some [Fe(DioxH)2L2] and [Fe(Diox)3(BOR)2] type chelates and clathrochelates. <i>Magyar Árvad Kémia</i> , 1999 , 57, 433-445	0	4

12	Infrared, ^{119}Sn , ^{13}C and ^1H NMR, ^{119}Sn and ^{13}C CP/MAS NMR and Mössbauer Spectral Study of Some Tributylstannyl Citrates and Propane-1,2,3-tricarboxylates. <i>Collection of Czechoslovak Chemical Communications</i> , 1999 , 64, 1028-1048		9
11	Emission and Transmission Mössbauer Spectroscopic (EMS and TMS) Study of Perovskite Oxides, (Ba, Ca)(Fe, Co)O ₃ –Absorbed with CO ₂ . <i>Hyperfine Interactions</i> , 1998 , 112, 7-12	0.8	2
10	Aftereffects in zeolite-encapsulated ^{57}Co -complexes 1998 , 113, 331-339		2
9	Free Volume and Swelling Dynamics of the Poly[(2-dimethylamino)ethyl methacrylate]-l-polyisobutylene Amphiphilic Network by Positron Annihilation Investigations. <i>Macromolecules</i> , 1998 , 31, 7770-7775	5.5	58
8	After-effects of the $^{57}\text{Co}(\text{EC})^{57}\text{Fe}$ nuclear decay in tris(2,2'-bipyridyl)cobalt(II) encapsulated in the supercage of zeolite Y. <i>Journal of Chemical Physics</i> , 1998 , 108, 8472-8478	3.9	3
7	Hydrogen-Bounded Clusters in Aqueous Solutions: A Combined Positron Annihilation and FTIR Study. <i>Materials Science Forum</i> , 1997 , 255-257, 348-350	0.4	2
6	Lattice dynamics of Y _{0.9} Pr _{0.1} Ba ₂ Cu ₃ O ₇ – <i>Physica C: Superconductivity and Its Applications</i> , 1997 , 277, 36-42	1.3	2
5	On the synthesis and steric distortion of the tris(2,2'-bipyridine)iron(II) complex ion in zeolite-Y. <i>Chemical Communications</i> , 1996 , 785-786	5.8	6
4	Synthesis of tin(IV) silicalites (MFI) and their characterization A Mössbauer and MAS NMR spectroscopy study. <i>Applied Catalysis A: General</i> , 1996 , 145, 155-184	5.1	40
3	Mössbauer study of a rigid organic microemulsion used as carrier for fixing a methanolic solution of ascorbic acid complexes of iron. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 1995 , 51, 799-804	4.4	2
2	^{57}Fe and ^{57}Co Mössbauer study of suppression of superconductivity in PrBa ₂ Cu ₃ O ₇ –. <i>Hyperfine Interactions</i> , 1994 , 93, 1621-1625	0.8	2
1	Emission Mössbauer study of oxygen deficient. <i>Physica C: Superconductivity and Its Applications</i> , 1993 , 209, 137-140	1.3	7