

# Irena Matulková

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6840447/publications.pdf>

Version: 2024-02-01

69  
papers

801  
citations

516215

16  
h-index

580395

25  
g-index

69  
all docs

69  
docs citations

69  
times ranked

927  
citing authors

#	ARTICLE	IF	CITATIONS
1	Novel compounds of 4-amino-1,2,4-triazole with dicarboxylic acids – crystal structures, vibrational spectra and non-linear optical properties. <i>Journal of Molecular Structure</i> , 2008, 873, 46-60.	1.8	80
2	A study of thermal decomposition and combustion products of disposable polyethylene terephthalate (PET) plastic using high resolution fourier transform infrared spectroscopy, selected ion flow tube mass spectrometry and gas chromatography mass spectrometry. <i>Molecular Physics</i> , 2008, 106, 1205-1214.	0.8	50
3	A new series of 3,5-diamino-1,2,4-triazolium(1+) inorganic salts and their potential in crystal engineering of novel NLO materials. <i>CrystEngComm</i> , 2012, 14, 4625.	1.3	41
4	Semi-organic salts of aniline with inorganic acids: prospective materials for the second harmonic generation. <i>CrystEngComm</i> , 2011, 13, 4131.	1.3	32
5	Synthesis, characterization and extraction behaviour of calix[4]arene with four propylene phosphonic acid groups on the lower rim. <i>Polyhedron</i> , 2005, 24, 311-317.	1.0	30
6	Investigation of laser-plasma chemistry in CO-N <sub>2</sub> -H <sub>2</sub> O mixtures using 18O labeled water. <i>Chemical Physics Letters</i> , 2009, 472, 14-18.	1.2	29
7	Inorganic salts of biguanide – Searching for new materials for second harmonic generation. <i>Journal of Molecular Structure</i> , 2008, 886, 103-120.	1.8	27
8	Organic salts of biguanide – An attempt to crystal engineering of novel materials for second harmonic generation. <i>Journal of Molecular Structure</i> , 2010, 966, 23-32.	1.8	26
9	Hydrothermal synthesis, characterization, and magnetic properties of cobalt chromite nanoparticles. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.	0.8	25
10	Novel material for second harmonic generation: 3-Amino-1,2,4-triazolinium(1+) hydrogen l-tartrate. <i>Journal of Molecular Structure</i> , 2007, 834-836, 328-335.	1.8	24
11	Co-Crystals of 2-Amino-5-Nitropyridine Barbitol with Extreme Birefringence and Large Second Harmonic Generation Effect. <i>Chemistry - A European Journal</i> , 2018, 24, 8727-8731.	1.7	24
12	Laser diode photoacoustic and FTIR laser spectroscopy of formaldehyde in the 2.3 $\mu$ m and 3.5 $\mu$ m spectral range. <i>Journal of Molecular Spectroscopy</i> , 2009, 256, 68-74.	0.4	22
13	Lidocaine barbiturate: a promising material for second harmonic generation. <i>CrystEngComm</i> , 2013, 15, 3275.	1.3	20
14	The crystal structure and optical properties of a pharmaceutical co-crystal – the case of the melamine-barbitol addition compound. <i>CrystEngComm</i> , 2014, 16, 5765.	1.3	18
15	Time-resolved Fourier-transform infrared emission spectroscopy of Au in the 1800-4000-cm <sup>-1</sup> region. <i>Physical Review A</i> , 2010, 81, 013407.	1.7	17
16	Crystal growth, crystal structure, vibrational spectroscopy, linear and nonlinear optical properties of guanidinium phosphates. <i>Optical Materials</i> , 2017, 69, 420-431.	1.7	17
17	Low-excited f-, g- and h-states in Au, Ag and Cu observed by Fourier-transform infrared spectroscopy in the 1000-7500-cm <sup>-1</sup> region. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 055401.	0.6	16
18	Time-resolved Fourier-transform infrared emission spectroscopy of Ag in the (1300-3600)-cm <sup>-1</sup> region. <i>Physical Review A</i> , 2010, 81, 013407.	1.7	15

#	ARTICLE	IF	CITATIONS
19	Vibrational spectra of guanylurea(1+) hydrogen phosphite—Novel remarkable material for nonlinear optics. <i>Vibrational Spectroscopy</i> , 2012, 63, 485-491.	1.2	15
20	Time-resolved FTIR emission spectroscopy of Cu in the 1800–3800 cm <sup>-1</sup> region: transitions involving f and g states and oscillator strengths. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 025002.	0.6	14
21	On preparation of nanocrystalline chromites by co-precipitation and autocombustion methods. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2015, 195, 66-73.	1.7	14
22	Thermoreversible magnetic nanochains. <i>Nanoscale</i> , 2019, 11, 16773-16780.	2.8	14
23	Non-thermal pulsed plasma activated water: environmentally friendly way for efficient surface modification of semiconductor nanoparticles. <i>Green Chemistry</i> , 2021, 23, 898-911.	4.6	13
24	Molecular crystals of 2-amino-1,3,4-thiadiazole with inorganic oxyacids—crystal engineering, phase transformations and NLO properties. <i>CrystEngComm</i> , 2014, 16, 1763.	1.3	12
25	Hydrothermal preparation of hydrophobic and hydrophilic nanoparticles of iron oxide and a modification with CM-dextran. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	0.8	10
26	Probing the Formation, Structure, and Reactivity of Zn(II), Ag(I), and Fe(II) Complexes with 2,2',6',6'-terpyridine on Ag Nanoparticles Surfaces by Time Evolution of SERS Spectra, Factor Analysis, and DFT Calculations. <i>Journal of Physical Chemistry C</i> , 2018, 122, 6066-6077.	1.5	10
27	4-Amino-1H-1,2,4-triazol-1-ium nitrate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2011, 67, o18-o19.	0.2	9
28	Organic salts of guanazole—Seeking for new materials for second harmonic generation. <i>Journal of Molecular Structure</i> , 2013, 1044, 239-247.	1.8	9
29	(2-Azoniasethyl)guanidinium dichloride—A promising phase-matchable NLO material employing a simple hydrogen bond acceptor in its structure. <i>Optical Materials</i> , 2015, 42, 39-46.	1.7	9
30	New zinc-glycine-iodide complexes as a product of equilibrium and non-equilibrium crystallization in the Gly—ZnI <sub>2</sub> —H <sub>2</sub> O system. <i>Journal of Molecular Structure</i> , 2016, 1120, 42-49.	1.8	9
31	The study of crystal structures and vibrational spectra of inorganic salts of 2,4-diaminopyrimidine. <i>Journal of Molecular Structure</i> , 2016, 1103, 82-93.	1.8	9
32	Surface enhanced infrared absorption spectroscopy for graphene functionalization on copper. <i>Carbon</i> , 2017, 124, 250-255.	5.4	9
33	Enamel apatite crystallinity significantly contributes to mammalian dental adaptations. <i>Scientific Reports</i> , 2018, 8, 5544.	1.6	9
34	Cocrystals of 2-Aminopyrimidine with Boric Acid—Crystal Engineering of a Novel Nonlinear Optically (NLO) Active Crystal. <i>Crystals</i> , 2019, 9, 403.	1.0	9
35	Self-Assemblies of Cationic Porphyrins with Functionalized Water-Soluble Single-Walled Carbon Nanotubes. <i>Journal of Nanoscience and Nanotechnology</i> , 2009, 9, 5795-5802.	0.9	8
36	Temperature-dependent vibrational spectroscopic and X-ray diffraction investigation of nanosized nickel chromite. <i>Journal of Molecular Structure</i> , 2015, 1090, 70-75.	1.8	8

#	ARTICLE	IF	CITATIONS
37	The red and blue luminescence in silicon nanocrystals with an oxidized, nitrogen-containing shell. <i>Faraday Discussions</i> , 2020, 222, 240-257.	1.6	8
38	Tris(2-amino-1,3-thiazolium) hydrogen sulfate sulfate monohydrate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2011, 67, o3216-o3217.	0.2	7
39	Comparison of the hydrogen-bond patterns in 2-amino-1,3,4-thiadiazolium hydrogen oxalate, 2-amino-1,3,4-thiadiazoleâ€“succinic acid (1/2), 2-amino-1,3,4-thiadiazoleâ€“glutaric acid (1/1) and 2-amino-1,3,4-thiadiazoleâ€“adipic acid (1/1). <i>Acta Crystallographica Section C, Structural Chemistry</i> , 2014, 70, 927-933.	0.2	7
40	Novel organic NLO material bis(N-phenylbiguanidium(1+)) oxalate â€“ A combined X-ray diffraction, DSC and vibrational spectroscopic study of its unique polymorphism. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2017, 170, 256-266.	2.0	6
41	Crystal Structure and (Non)linear Optical Properties of a Cyanuric Acid Isoniazid &lt;1/1&gt; Co-crystal: Shortcomings of Phase Matching Determination from Powdered Samples. <i>Crystal Growth and Design</i> , 2019, 19, 6831-6836.	1.4	6
42	Bis(2-phenylbiguanidium) adipate tetrahydrate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2011, 67, o118-o119.	0.2	5
43	Dispersible cobalt chromite nanoparticles: facile synthesis and size driven collapse of magnetism. <i>RSC Advances</i> , 2016, 6, 107659-107668.	1.7	5
44	Crystal growth, thermal expansion, pyroelectricity and vibrational spectroscopy of barium antimony tartrate, Ba[Sb2(+)(C4H2O6)2]Â·3H2O. <i>Optical Materials</i> , 2019, 91, 70-79.	1.7	5
45	Linear and nonlinear optical properties, pyroelectricity and vibrational spectroscopy of polar guanidinium hydrogen phosphite, GuH2PO3, and hydrogen selenite, GuHSeO3. <i>Optical Materials</i> , 2021, 111, 110722.	1.7	5
46	2-Phenylbiguanidinium hydrogen succinate methanol monosolvate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2010, 66, o3187-o3188.	0.2	5
47	Infrared diode laser spectroscopy. <i>Opto-electronics Review</i> , 2010, 18, .	2.4	4
48	Environmental conditions in near-wall plasmas generated by impact of energetic particle fluxes. <i>High Energy Density Physics</i> , 2013, 9, 568-572.	0.4	4
49	Kaolinite-alunite association in late Gothic white grounds from Slovakia: A local peculiarity in painting technology. <i>Applied Clay Science</i> , 2017, 144, 79-87.	2.6	4
50	Vibrational spectroscopic and crystallographic study of the novel guanylurea salts with sulphuric and selenic acids. <i>Journal of Molecular Structure</i> , 2017, 1131, 294-305.	1.8	4
51	Diagnostic and characterization of the VCSEL diodes based onÂGaSb. <i>Applied Physics B: Lasers and Optics</i> , 2010, 99, 333-338.	1.1	3
52	2-Amino-1,3-thiazolium dihydrogen phosphate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2011, 67, o3410-o3411.	0.2	3
53	Vibrational Spectroscopic and X-Ray Single Crystal Diffraction Investigation of Tetra-n-Alkylammonium Hydrogen Selenates. <i>Journal of Chemical Crystallography</i> , 2017, 47, 59-68.	0.5	3
54	Migrating hydrogen in 2,4,6-triaminopyrimidinium(1+)<sub> <i>x</i> </sub> hydrogen trioxofluorophosphate(âˆ“) <sub> <i>x</i> </sub> monohydrate/2,4,6-triaminopyrimidinium(2+)<sub> <i>x</i> </sub> 1â€“ <sub> <i>x</i> </sub> trioxofluorophosphate(2â€“) <sub> <i>x</i> </sub> 1â€“ <sub> <i>x</i> </sub> monohydrate (0.0 &lt; <i>x</i> &lt; 0.73) with changing temperature. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2017, 73, 1114-1124.	0.5	3

#	ARTICLE	IF	CITATIONS
55	Bis[(5 <i>RS</i> ,11 <i>RS</i> )-2,8-dimethyl-5,10-methano-5,6,11,12-tetrahydrodibenzo[ <i>b,f</i> ][1,5]diazocine-5-ium dihydrogen phosphate] tris(phosphoric acid) methanol solvate. Acta Crystallographica Section E: Structure Reports Online, 2005, 61, o3941-o3943.	0.2	2
56	EUV ablation: a study of the process. , 2015, , .		2
57	Crystal structures and vibrational spectra of biuret co-crystals with cyanuric and glutaric acids, discussion of hydrogen bonding involving carbonyl groups. Zeitschrift Fur Kristallographie - Crystalline Materials, 2016, 231, 291-300.	0.4	2
58	Crystallographic aspects of hydrated salts of 4,6-diaminopyrimidine with the first five dicarboxylic acids. Zeitschrift Fur Kristallographie - Crystalline Materials, 2017, 232, 471-484.	0.4	2
59	The crystal structure of the inner salt of 2-[(aminoiminomethyl)amino]ethylcarbamic acid [systematic name: (2-((diaminomethylene)ammonio)ethyl)carbamate], C <sub>4</sub> H <sub>10</sub> N <sub>4</sub> O <sub>2</sub> . Zeitschrift Fur Kristallographie - New Crystal Structures, 2017, 232, 685-687.	0.1	1
60	Solid phases in the systems glycineâ€“ZnX <sub>2</sub> â€“H <sub>2</sub> O (X=Cl, Br, I) at 25Â°C. Monatshefte FÃ¼r Chemie, 2018, 149, 299-311.	0.9	1
61	The crystal structure of 3-amino-(2,4-dioxopent-3-yl)-4,5-dihydro-1,2,4-triazinium nitrate, C <sub>8</sub> H <sub>13</sub> N <sub>5</sub> O <sub>5</sub> . Zeitschrift Fur Kristallographie - New Crystal Structures, 2019, 234, 461-463.	0.1	1
62	MQW laser diode photoacoustic detection of formaldehyde in 2.3 µm spectral range. , 2007, , .		0
63	Diagnostic and characterization of the VCSEL diodes based on GaSb. , 2009, , .		0
64	Characterization of GaSb based VCSE and MQW lasers for 2.3 µm sensing application. , 2009, , .		0
65	Optical characterization of the VCSEL diodes based on GaSb. , 2010, , .		0
66	Laser-plasma chemistry: principles and applications. Proceedings of SPIE, 2013, , .	0.8	0
67	Frontispiece: Co-Crystals of 2-Amino-5-Nitropyridine Barbitol with Extreme Birefringence and Large Second Harmonic Generation Effect. Chemistry - A European Journal, 2018, 24, .	1.7	0
68	Inorganic Salts of N-phenylbiguanidium(1+)â€“Novel Family with Promising Representatives for Nonlinear Optics. International Journal of Molecular Sciences, 2021, 22, 8419.	1.8	0
69	Comparison of hydrates of 4,6-diaminopyrimidine with selected dicarboxylic acids (oxalic, malonic,) Tj ETQq1 1 0.784314 rgBT /Overlocl s346-s346.	0.0	0