

Ivan Biaggio

List of Publications by Year in descending order

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105
papers

3,071
citations

172457

29
h-index

161849

54
g-index

106
all docs

106
docs citations

106
times ranked

3185
citing authors

#	ARTICLE	IF	CITATIONS
1	A new class of organic donor-acceptor molecules with large third-order optical nonlinearities. Chemical Communications, 2005, , 737-739.	4.1	240
2	1,1â€Dicyanoâ€4â€4â€(diethylamino)phenyl]butaâ€1,3â€dienes: Structureâ€Property Relationships. European Journal of Organic Chemistry, 2012, 2012, 2756-2765.	2.4	202
3	Direct Imaging of Anisotropic Exciton Diffusion and Triplet Diffusion Length in Rubrene Single Crystals. Physical Review Letters, 2011, 107, 017402.	7.8	163
4	Refractive indices of orthorhombic KNbO ₃ I Dispersion and temperature dependence. Journal of the Optical Society of America B: Optical Physics, 1992, 9, 380.	2.1	156
5	Silicon Organic Hybrid Technologyâ€A Platform for Practical Nonlinear Optics. Proceedings of the IEEE, 2009, 97, 1304-1316.	21.3	145
6	A Highâ€Optical Quality Supramolecular Assembly for Thirdâ€Order Integrated Nonlinear Optics. Advanced Materials, 2008, 20, 4584-4587.	21.0	138
7	Refractive indices of orthorhombic KNbO ₃ II Phase-matching configurations for nonlinear-optical interactions. Journal of the Optical Society of America B: Optical Physics, 1992, 9, 507.	2.1	137
8	Property Tuning in Charge-Transfer Chromophores by Systematic Modulation of the Spacer between Donor and Acceptor. Chemistry - A European Journal, 2007, 13, 5378-5387.	3.3	119
9	Triplet exciton dynamics in rubrene single crystals. Physical Review B, 2011, 84, .	3.2	105
10	Optical properties of highly nonlinear silicon-organic hybrid (SOH) waveguide geometries. Optics Express, 2009, 17, 17357.	3.4	102
11	Absorption and photoluminescence spectroscopy of rubrene single crystals. Physical Review B, 2012, 86, .	3.2	100
12	Terahertz-induced lensing and its use for the detection of terahertz pulses in a birefringent crystal. Applied Physics Letters, 2004, 84, 2229-2231.	3.3	92
13	Extended conjugation and donor-acceptor substitution to improve the third-order optical nonlinearity of small molecules. Applied Physics Letters, 2007, 90, 251106.	3.3	88
14	Primary Photoexcitations and the Origin of the Photocurrent in Rubrene Single Crystals. Physical Review Letters, 2006, 96, 056604.	7.8	83
15	Highly efficient third-order optical nonlinearities in donor-substituted cyanoethynylethene molecules. Optics Letters, 2005, 30, 3057.	3.3	75
16	Mobility of an electron in a multimode polar lattice. Physical Review B, 1999, 60, 299-307.	3.2	66
17	Donorâ€Acceptor (Dâ€A)â€Substituted Polyyne Chromophores: Modulation of Their Optoelectronic Properties by Varying the Length of the Acetylene Spacer. Chemistry - A European Journal, 2013, 19, 12693-12704.	3.3	61
18	Band Mobility of Photoexcited Electrons in Bi ₁₂ SiO ₂₀ . Physical Review Letters, 1997, 78, 891-894.	7.8	53

#	ARTICLE	IF	CITATIONS
19	Anisotropy of the Electron and Hole Drift Mobility in KNbO_3 and BaTiO_3 . <i>Physical Review Letters</i> , 1997, 78, 106-109.	7.8	50
20	Homoconjugated Push-Pull and Spiro Systems: Intramolecular Charge-Transfer Interactions and Third-Order Optical Nonlinearities. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 6207-6211.	13.8	49
21	Optimized generation of THz pulses via optical rectification in the organic salt DAST. <i>Optics Communications</i> , 2003, 224, 337-341.	2.1	39
22	Chiral and Achiral Charge-Transfer Chromophores with a Dendralene-Type Backbone by Electronically Controlled Cycloaddition/Cycloreversion Cascades. <i>European Journal of Organic Chemistry</i> , 2010, 2010, 2487-2503.	2.4	36
23	Eye-safe large field of view homodyne detection using a photorefractive $\text{CdTe}:\text{V}$ crystal. <i>Optics Communications</i> , 1996, 129, 293-300.	2.1	34
24	Oblique Incidence Organic Molecular Beam Deposition and Nonlinear Optical Properties of Organic Thin Films with a Stable In-Plane Directional Order. <i>Advanced Materials</i> , 1999, 11, 745-749.	21.0	34
25	Space-charge and trap-filling effects in organic thin film field-effect transistors. <i>Physical Review B</i> , 2004, 70, .	3.2	34
26	Comparison of CC Triple and Double Bonds as Spacers in Push-Pull Chromophores. <i>European Journal of Organic Chemistry</i> , 2011, 2011, 4307-4317.	2.4	33
27	Influence of diffusion, trapping, and state filling on charge injection and transport in organic insulators. <i>Physical Review B</i> , 2003, 68, .	3.2	31
28	Compact TCBD based molecules and supramolecular assemblies for third-order nonlinear optics. <i>Optical Materials Express</i> , 2012, 2, 294.	3.0	31
29	Extremely efficient exciton fission and fusion and its dominant contribution to the photoluminescence yield in rubrene single crystals. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	30
30	Nonlocal Contributions to Degenerate Four-Wave Mixing in Noncentrosymmetric Materials. <i>Physical Review Letters</i> , 1999, 82, 193-196.	7.8	28
31	Investigating the origin of the high photoconductivity of rubrene single crystals. <i>Physical Review B</i> , 2008, 77, .	3.2	28
32	Routes to singlet exciton fission in rubrene crystals and amorphous films. <i>AIP Advances</i> , 2019, 9, 095027.	1.3	28
33	$\langle i \rangle N \langle i \rangle, \langle i \rangle N \langle i \rangle$ -Dicyanoquinone Diimide-Derived Donor-Acceptor Chromophores: Conformational Analysis and Optoelectronic Properties. <i>Organic Letters</i> , 2012, 14, 54-57.	4.6	27
34	Synthesis and properties of a ROMP backbone polymer with efficient, laterally appended nonlinear optical chromophores. <i>Journal of Materials Chemistry</i> , 2004, 14, 292-295.	6.7	22
35	Two-photon absorption and spectroscopy of the lowest two-photon transition in small donor-acceptor-substituted organic molecules. <i>Physical Review A</i> , 2015, 91, .	2.5	20
36	Optical image processing by an atomic vapour. <i>Nature</i> , 1994, 371, 318-320.	27.8	19

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37	Top-emitting 230dotsâ•in. active-matrix polymer light-emitting diode displays on flexible metal foil substrates. Applied Physics Letters, 2007, 90, 151114.	3.3	19
38	Quantum beats of a multiexciton state in rubrene single crystals. Applied Physics Letters, 2018, 112, .	3.3	19
39	Impurity-gas-dependent charge injection properties at the electrodeâ•organic interface in organic light-emitting diodes. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 85, 144-148.	3.5	16
40	Homokonjugierte Push-pull- und Spirosysteme: intramolekulare Charge-Transfer-Wechselwirkungen und nichtlineare optische Eigenschaften dritter Ordnung. Angewandte Chemie, 2010, 122, 6343-6347.	2.0	16
41	Coupling-length phase matching for nonlinear optical frequency conversion in parallel waveguides. Physical Review A, 2014, 90, .	2.5	15
42	Influence of shallow traps on the enhancement of the photorefractive grating amplitude by a high-frequency alternating electric field: a probabilistic analysis. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 2306.	2.1	14
43	Piezoelectric contributions to pulsed degenerate four-wave mixing. Applied Physics Letters, 2001, 78, 1861-1863.	3.3	14
44	Nonplanar Pushâ•Pull Chromophores for Opto-Electronic Applications. Chimia, 2010, 64, 409.	0.6	14
45	Two mechanisms of exciton dissociation in rubrene single crystals. Applied Physics Letters, 2010, 96, .	3.3	14
46	Optimum conjugation length in donorâ•acceptor molecules for third-order nonlinear optics. Journal of the Optical Society of America B: Optical Physics, 2016, 33, E130.	2.1	14
47	Defect density dependent photoluminescence yield and triplet diffusion length in rubrene. Applied Physics Letters, 2016, 108, .	3.3	14
48	Exciton dissociation by a static electric field followed by nanoscale charge transport in PPV polymer films. Physical Review B, 2006, 73, .	3.2	13
49	Nanosecond pump and probe observation of bimolecular exciton effects in rubrene single crystals. Applied Physics Letters, 2015, 106, .	3.3	13
50	Tunable self-action of light in optical rectification. Optics Communications, 2002, 213, 351-356.	2.1	12
51	Temperature-dependent electron mobility and large polaron interpretation inBi12SiO20. Physical Review B, 2003, 67, .	3.2	12
52	The Appeal of Small Molecules for Practical Nonlinear Optics. Chemistry - A European Journal, 2022, 28, .	3.3	12
53	Fast excited state diffusion in a-As₂Se₃ chalcogenide films. Applied Physics Letters, 2012, 101, 061911.	3.3	11
54	Geminate exciton fusion fluorescence as a probe of triplet exciton transport after singlet fission. Physical Review B, 2021, 103, .	3.2	11

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55	<title>Detection of ultrasonic vibrations on rough surfaces through the photorefractive effect</title>. , 1996, 2782, 464.		10
56	Degenerate four-wave mixing in noncentrosymmetric materials. Physical Review A, 2001, 64, .	2.5	10
57	Characterization of the bipolar mobility in polar materials by interband photoexcitation. Physical Review B, 1997, 56, 12196-12200.	3.2	9
58	Interband transitions in bismuth germanate crystals grown from the melts of several [Ge/Bi] ratios. Journal of the Optical Society of America B: Optical Physics, 1999, 16, 1243.	2.1	9
59	Method for generating solitons sustained by competing nonlinearities by use of optical rectification. Optics Letters, 2002, 27, 1631.	3.3	9
60	Kinetics of photo-dissolution within Ag/As ₂ S ₃ heterostructure. Journal of Non-Crystalline Solids, 2018, 500, 468-474.	3.1	9
61	Optical correlator that uses cesium vapor. Optics Letters, 1994, 19, 1765.	3.3	8
62	Interface dependent electrical properties of organic light emitting devices in ultra high vacuum. Synthetic Metals, 2000, 111-112, 307-310.	3.9	8
63	Optical determination of the charge carrier mobility in Sn ₂ P ₂ S ₆ . Applied Physics Letters, 2016, 109, .	3.3	6
64	Two-photon absorption spectroscopy of rubrene single crystals. Physical Review B, 2014, 89, .	3.2	5
65	Diffusivity of the interstitial hydrogen shallow donor in In ₂ O ₃ . Journal of Applied Physics, 2018, 123, .	2.5	5
66	Recording Speed and Determination of Basic Materials Properties. , 2007, , 51-81.		4
67	Self-Assembly Growth of Organic Thin Films and Nanostructures by Molecular Beam Deposition. ACS Symposium Series, 2001, , 34-49.	0.5	3
68	Ferroelectric Materials. , 2006, , 6-1-6-66.		3
69	Optimizing specific third-order polarizabilities and approaching the fundamental limit in donor substituted cyanoethynylethene (CEE) molecules. , 2006, 6331, 633101.		3
70	Three-color nonlinear optical mixing for the determination of the refractive index dispersion of a tellurite glass. Applied Physics Letters, 2010, 97, 131104.	3.3	3
71	Ultra-high vacuum reveals interface dependent and impurity-gas dependent charge injection in organic light-emitting diodes. , 2001, 4105, 290.		2
72	A New Class of Organic Donor-acceptor Molecules with Large Third-Order Optical Nonlinearities.. ChemInform, 2005, 36, no.	0.0	2

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73	Nonlinear optics near the fundamental limit: introduction. Journal of the Optical Society of America B: Optical Physics, 2016, 33, NOF1.	2.1	2
74	Electrical properties of organic light-emitting diodes (OLEDs) studied by impedance spectroscopy in ultra-high vacuum. , 2001, 4105, 299.		1
75	Transparent ferroelectric glass-ceramics for second harmonic generation and electro-optic device applications. , 2004, , .		1
76	Holographic Time of Flight. , 2003, , 101-120.		1
77	Dense Small Molecule Assemblies for Third-Order Nonlinear Optics: DDMEBT. , 2011, , .		1
78	Noncollinear third-harmonic Maker fringes for the determination of third-order nonlinear optical susceptibilities. Optics Letters, 2013, 38, 4461.	3.3	1
79	Dielectrophoresis and colloidal phase transitions for ultra-broadband optical limiting. Optics Letters, 2019, 44, 3801.	3.3	1
80	Dual-core optical fibers for efficient mid-infrared generation via third-order frequency mixing and coupling-length phase matching. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 729.	2.1	1
81	Electrically poled vapor-deposited organic glasses for integrated electro-optics. Optics Letters, 2022, 47, 1924.	3.3	1
82	Intracavity Frequency Doubling Of A Diode Pumped Nd:YAG Laser Using A KNbO3 Crystal. Proceedings of SPIE, 1989, 1017, 159.	0.8	0
83	Potassium Niobate (KNbO3). , 1997, , 821-843.		0
84	Process Technology for High-Resolution AM-PLED Displays on Flexible Metal Foil Substrates. ECS Transactions, 2006, 3, 349-359.	0.5	0
85	Large specific third order polarizabilities in organic molecules for vapor deposition. , 2006, , .		0
86	Highly Efficient Two-Photon Absorption Cross-Sections and Their Frequency Dependence in Small Organic Molecules. , 2007, , .		0
87	Highly efficient two-photon absorption cross-sections and their frequency dependence in small organic molecules. , 2007, , .		0
88	Stress Fiber Organization and Dynamics in Cells Adhered to Substrates of Varying Stiffness. Biophysical Journal, 2012, 102, 694a.	0.5	0
89	Introduction: Nonlinear Optics (NLO) 2017 feature issue. Optics Express, 2018, 26, 3577.	3.4	0
90	Introduction: nonlinear optics (NLO) 2017 feature issue. Optical Materials Express, 2018, 8, 491.	3.0	0

#	ARTICLE	IF	CITATIONS
91	On the connection between bound and scattering states of finite square-well potentials: a unified approach. European Journal of Physics, 2021, 42, 025405.	0.6	0
92	Photoexcitation and Charge Transport in Organic Molecular Crystals. , 2007, , .		0
93	Vapor deposited small molecules as an organic nonlinear optical cladding for silicon on insulator technology. , 2009, , .		0
94	A High-Optical Quality Supramolecular Assembly for Third-Order Nonlinear Optics. , 2009, , .		0
95	Two-photon spectroscopy of Rubrene single crystals. , 2011, , .		0
96	Spectroscopy of Anisotropic Optical Absorption and Luminescence in Rubrene Single Crystals. , 2013, , .		0
97	Phase Matched Three-Color Wave Mixing for the Determination of Refractive Index Dispersion. , 2013, , .		0
98	Specific Third-Order Polarizability and Extended Conjugation in DA-Substituted Molecules for Third-Order Nonlinear Optics. , 2013, , .		0
99	Non-Collinear Maker Fringes for the Determination of Third-order Susceptibilities. , 2013, , .		0
100	Exciton Dynamics in the Rubrene Single Crystal. , 2013, , .		0
101	Fluorescence Quantum Beats due to Long-Lived Entangled Triplet Excitons in Rubrene Crystals. , 2020, , .		0
102	Optical Traps and Colloidal Phase Transitions for Ultra-Broadband Optical Limiting. , 2020, , .		0
103	Transient Triplet Exciton Gratings in Rubrene Single Crystals. , 2020, , .		0
104	Broadband Third-Order Frequency Downconversion in Dual-Core Fibers via CLPM. , 2020, , .		0
105	Electrically Poled Vapor Deposited Organic Glasses for Integrated Electro-optics. , 2021, , .		0