

# Renato Torre

## List of Publications by Year in descending order

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115  
papers

3,154  
citations

185998

28  
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168136

53  
g-index

124  
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124  
docs citations

124  
times ranked

3126  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vibrational Spectroscopy and Dynamics of Water. <i>Chemical Reviews</i> , 2016, 116, 7590-7607.	23.0	300
2	Amplified Extended Modes in Random Lasers. <i>Physical Review Letters</i> , 2004, 93, 053903.	2.9	258
3	Structural relaxation in supercooled water by time-resolved spectroscopy. <i>Nature</i> , 2004, 428, 296-299.	13.7	239
4	Evidence of two distinct local structures of water from ambient to supercooled conditions. <i>Nature Communications</i> , 2013, 4, 2401.	5.8	158
5	Scaling Up Electronic Spin Qubits into a Three-Dimensional Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2018, 140, 12090-12101.	6.6	122
6	Chaotic behavior of a random laser with static disorder. <i>Physical Review A</i> , 2007, 76, .	1.0	114
7	Spin Dynamics and Low Energy Vibrations: Insights from Vanadyl-Based Potential Molecular Qubits. <i>Journal of the American Chemical Society</i> , 2017, 139, 4338-4341.	6.6	114
8	Phase-locking to a free-space terahertz comb for metrological-grade terahertz lasers. <i>Nature Communications</i> , 2012, 3, 1040.	5.8	105
9	Structural Effects on the Spin Dynamics of Potential Molecular Qubits. <i>Inorganic Chemistry</i> , 2018, 57, 731-740.	1.9	86
10	Influence of local liquid structure on orientational dynamics: isotropic phase of liquid crystals. <i>The Journal of Physical Chemistry</i> , 1993, 97, 9478-9487.	2.9	72
11	Nanosecond time scale dynamics of pseudo-nematic domains in the isotropic phase of liquid crystals. <i>Chemical Physics Letters</i> , 1992, 194, 213-216.	1.2	70
12	Spectral super-resolution spectroscopy using a random laser. <i>Nature Photonics</i> , 2020, 14, 177-182.	15.6	62
13	First-Principles Investigation of Spin-Phonon Coupling in Vanadium-Based Molecular Spin Quantum Bits. <i>Inorganic Chemistry</i> , 2019, 58, 10260-10268.	1.9	59
14	Time-resolved optical Kerr effect in a fragile glass-forming liquid, salol. <i>Physical Review E</i> , 1998, 57, 1912-1920.	0.8	53
15	Diffusive and oscillatory dynamics of liquid iodobenzene measured by femtosecond optical Kerr effect. <i>Journal of Chemical Physics</i> , 1999, 110, 8653-8662.	1.2	53
16	Frequency-Comb-Assisted Terahertz Quantum Cascade Laser Spectroscopy. <i>Physical Review X</i> , 2014, 4, .	2.8	52
17	Acoustic and relaxation processes in supercooled orthoterphenyl by optical-heterodyne transient grating experiment. <i>Physical Review E</i> , 2001, 64, 061504.	0.8	47
18	Time-resolved optical Kerr effect on a fragile glass-forming liquid: Test of different mode coupling theory aspects. <i>Europhysics Letters</i> , 2000, 52, 324-329.	0.7	42

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19	Observations of second-harmonic generation from randomly rough metal surfaces. <i>Physical Review B</i> , 1997, 55, 7985-7992.	1.1	39
20	Exploring the Organometallic Route to Molecular Spin Qubits: The [CpTi(cot)] Case. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 2588-2593.	7.2	38
21	Observations of backscattering effects in second-harmonic generation from a weakly rough metal surface. <i>Optics Letters</i> , 1996, 21, 1738.	1.7	33
22	Characterization of the second-harmonic response of a silver-air interface. <i>New Journal of Physics</i> , 2005, 7, 154-154.	1.2	33
23	Supercooled water relaxation dynamics probed with heterodyne transient grating experiments. <i>Physical Review E</i> , 2006, 74, 031502.	0.8	33
24	Photodissociation Dynamics of the Iodine-Arene Charge-Transfer Complex. <i>The Journal of Physical Chemistry</i> , 1996, 100, 7822-7831.	2.9	32
25	Translation-rotation coupling in transient grating experiments: Theoretical and experimental evidences. <i>Europhysics Letters</i> , 2001, 56, 407-413.	0.7	32
26	A comparative study on bulk and nanoconfined water by time-resolved optical Kerr effect spectroscopy. <i>Faraday Discussions</i> , 2013, 167, 293.	1.6	31
27	THz time-domain spectroscopic investigations of thin films. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 118, 282-288.	2.5	31
28	Hard X-ray transient grating spectroscopy on bismuth germanate. <i>Nature Photonics</i> , 2021, 15, 499-503.	15.6	31
29	Second-harmonic generation from a strongly rough metal surface. <i>Optics Communications</i> , 1997, 138, 341-344.	1.0	28
30	The dynamics of succinonitrile in the plastic phase by subpicosecond time-resolved optical Kerr effect. <i>Journal of Chemical Physics</i> , 1992, 96, 110-115.	1.2	24
31	Time-resolved optical Kerr effect experiments on supercooled benzene and test of mode-coupling theory. <i>Philosophical Magazine</i> , 2004, 84, 1491-1498.	0.7	22
32	The low frequency phonons dynamics in supercooled LiCl, 6H <sub>2</sub> O. <i>Journal of Chemical Physics</i> , 2009, 131, 124504.	1.2	21
33	Optical Kerr effect of liquid and supercooled water: The experimental and data analysis perspective. <i>Journal of Chemical Physics</i> , 2014, 141, 084507.	1.2	21
34	Water in a polymeric electrolyte membrane: Sorption/desorption and freezing phenomena. <i>Journal of Membrane Science</i> , 2014, 453, 419-424.	4.1	21
35	Exploring the Organometallic Route to Molecular Spin Qubits: The [CpTi(cot)] Case. <i>Angewandte Chemie</i> , 2021, 133, 2620-2625.	1.6	21
36	Orientational Dynamics in the Isotropic Phase of a Nematic Mixture: Subpicosecond Time Resolved Optical Kerr Effect Experiments on ZLI-1167 Liquid Crystal. <i>Molecular Crystals and Liquid Crystals</i> , 1995, 262, 391-402.	0.3	20

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37	Experimental studies of the ortho-toluidine glass transition. <i>Physical Review E</i> , 2003, 67, 021505.	0.8	20
38	Propagation of acoustic surface waves on a phononic surface investigated by transient reflecting grating spectroscopy. <i>Journal of the Mechanics and Physics of Solids</i> , 2011, 59, 2370-2381.	2.3	20
39	Pre-transitional effects in the liquid- $\rightarrow$ plastic phase transition of p-terphenyl. <i>Chemical Physics Letters</i> , 1993, 212, 90-95.	1.2	18
40	Collective and single-particle dynamics near the isotropic- $\rightarrow$ nematic phase transition. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998, 77, 645-653.	0.6	18
41	Thin layered drawing media probed by THz time-domain spectroscopy. <i>Analyst, The</i> , 2017, 142, 42-47.	1.7	18
42	Molecular dynamics of $\beta$ -carotene in solution measured by subpicosecond transient optical Kerr effect. <i>Chemical Physics Letters</i> , 1992, 193, 23-29.	1.2	17
43	Orientational dynamics on glassformer 2 [Ca(NO <sub>3</sub> ) <sub>2</sub> ] $\cdot$ 3[KNO <sub>3</sub> ]: A study by transient optical Kerr effect. <i>Journal of Chemical Physics</i> , 1993, 98, 4892-4896.	1.2	17
44	Acoustic, thermal and flow processes in a water filled nanoporous glass by time-resolved optical spectroscopy. <i>Journal of the Mechanics and Physics of Solids</i> , 2010, 58, 1302-1317.	2.3	17
45	Observation of nanophase segregation in LiCl aqueous solutions from transient grating experiments. <i>Journal of Chemical Physics</i> , 2013, 139, 044501.	1.2	17
46	Monte Carlo calculations of spectral features in random lasing. <i>Journal of Nanophotonics</i> , 2010, 4, 041550.	0.4	16
47	Temperature of maximum density of water in hydrophilic confinement measured by transient grating spectroscopy. <i>Europhysics Letters</i> , 2010, 92, 26005.	0.7	16
48	Does there exist an anomalous sound dispersion in supercooled water?. <i>Philosophical Magazine</i> , 2011, 91, 1796-1800.	0.7	16
49	Heterodyne detected transient gratings in supercooled molecular liquids. <i>European Physical Journal B</i> , 2004, 39, 169-197.	0.6	15
50	Remote control of liquid crystal elastomer random laser using external stimuli. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	15
51	Temperature Dependence of Spin-Phonon Coupling in [VO(acac) <sub>2</sub> ]: A Computational and Spectroscopic Study. <i>Journal of Physical Chemistry C</i> , 2021, 125, 22100-22110.	1.5	15
52	Picosecond measurements of relaxation of internal modes in crystalline benzene as a function of temperature. <i>Journal of Chemical Physics</i> , 1990, 93, 2967-2973.	1.2	14
53	Travelling-wave parametric conversion of microjoule pulses with LBO. <i>Optics Communications</i> , 1995, 118, 353-359.	1.0	12
54	Transient grating experiment on supercooled water. <i>Philosophical Magazine</i> , 2004, 84, 1471-1479.	0.7	12

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55	Acoustic phenomena in porous media studied by transient grating spectroscopy: A critical test of the Biot theory. <i>Europhysics Letters</i> , 2008, 81, 58003.	0.7	12
56	Supercooling and freezing processes in nanoconfined water by time-resolved optical Kerr effect spectroscopy. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 194107.	0.7	12
57	Second-harmonic generation from plasmon polariton excitation on silver diffraction gratings: comparisons of theory and experiment. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017, 34, 27.	0.9	12
58	Time Resolved Fluorescence of Dye Solutions in Nematic Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1996, 282, 461-472.	0.3	11
59	Effective Shape and Dynamics of Chlorophyll a in a Nematic Liquid Crystal. <i>Journal of Physical Chemistry B</i> , 1998, 102, 1624-1631.	1.2	11
60	Time-resolved optical Kerr effect in m-toluidine: A test of mode-coupling theory predictions. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1999, 79, 1897-1905.	0.6	11
61	Fast dynamics of a fragile glass former by time-resolved spectroscopy. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002, 82, 541-551.	0.6	11
62	Nonequilibrium thermodynamic description of the coupling between structural and entropic modes in supercooled liquids. <i>Physical Review E</i> , 2003, 67, 015102.	0.8	11
63	A real-time acquisition system for pump-probe spectroscopy. <i>Philosophical Magazine</i> , 2007, 87, 731-740.	0.7	11
64	Optical second-harmonic generation during switching in a ferroelectric liquid-crystal cell. <i>Physical Review E</i> , 1994, 50, 3766-3773.	0.8	10
65	Molecular dynamics of $\beta$ -carotene in solution by resonance enhanced optical Kerr effect. <i>Journal of Chemical Physics</i> , 1995, 102, 9537-9543.	1.2	10
66	Spectral characterization of fluorescent 5-iodoacetamidotetramethylrhodamine and its N-acetylcysteine derivative. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 4571-4582.	1.3	10
67	Relaxation processes in an epoxy resin studied by time-resolved optical Kerr effect. <i>Physical Review E</i> , 2002, 66, 011502.	0.8	10
68	Time-Resolved Spectroscopy in Complex Liquids. , 2008, , .		10
69	Frequency and time resolved light scattering on longitudinal phonons in molecular supercooled liquids. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S825-S834.	0.7	9
70	Analysis of a heterodyne-detected transient-grating experiment on a molecular supercooled liquid. II. Application to $m$ -toluidine. <i>Physical Review E</i> , 2007, 76, 011510.	0.8	9
71	Structure and Acoustic Properties of Hydrated Nafion Membranes. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10121-10127.	1.2	9
72	Influence of inorganic nanoparticles on the glass transitions of polyurea elastomers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2320-2327.	0.8	9

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73	Resonance-enhanced time-resolved optical Kerr effect of $\beta^2$ -carotene in solution. <i>Optics Letters</i> , 1992, 17, 775.	1.7	8
74	The low frequency dynamics of supercooled LiBr, 6H <sub>2</sub> O. <i>Journal of Chemical Physics</i> , 2011, 134, 034514.	1.2	8
75	Pressure Effects on Water Dynamics by Time-Resolved Optical Kerr Effect. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3063-3068.	2.1	8
76	Drawing materials studied by THz spectroscopy. <i>Acta IMEKO (2012)</i> , 2017, 6, 12.	0.4	8
77	Polymer thermal and acoustic properties using heterodyne detected transient grating technique. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011, 49, 685-690.	2.4	7
78	Evidence of slow acoustic surface waves on a 1D phononic surface by a pulsed laser spectroscopic technique resolved in time and space. <i>Europhysics Letters</i> , 2012, 97, 44010.	0.7	7
79	Light scattering studies of high-frequency relaxation processes in organic glass formers. <i>Journal of Physics Condensed Matter</i> , 1996, 8, 9593-9598.	0.7	6
80	Analysis of a heterodyne-detected transient-grating experiment on a molecular supercooled liquid. I. Basic formulation of the problem. <i>Physical Review E</i> , 2007, 76, 011509.	0.8	6
81	Acoustic phenomena in filled porous glasses by time-resolved spectroscopy. <i>European Physical Journal: Special Topics</i> , 2007, 141, 133-136.	1.2	6
82	Optical kerr effect measurements on supercooled water: The experimental perspective. <i>Journal of Physics: Conference Series</i> , 2009, 177, 012009.	0.3	6
83	Optical Kerr Effect Experiments on Complex Liquids. , 2008, , 73-127.		6
84	Perspectives and recent advances in super-resolution spectroscopy: Stochastic and disordered-based approaches. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	6
85	Transient grating experiments on CCl <sub>4</sub> -filled porous glasses. <i>Philosophical Magazine</i> , 2007, 87, 715-722.	0.7	5
86	An ultra-rapid cryo-technique for complex organisms. <i>Cryobiology</i> , 2015, 71, 391-397.	0.3	5
87	THz dynamics of nanoconfined water by ultrafast optical spectroscopy. <i>Measurement Science and Technology</i> , 2017, 28, 014009.	1.4	5
88	A non-traditional approach to cryopreservation by ultra-rapid cooling for human mesenchymal stem cells. <i>PLoS ONE</i> , 2019, 14, e0220055.	1.1	5
89	Calculation of the signal time-profile in transient CARS experiments. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1991, 52, 132-137.	1.5	4
90	The CARS excitation profile at the MnO <sup>2+</sup> ion doped in KClO <sub>4</sub> . <i>Chemical Physics Letters</i> , 1992, 199, 417-422.	1.2	4

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91	Modulation of the Optical Second Harmonic Generation in Ferroelectric Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1994, 251, 101-109.	0.3	4
92	Transient grating study of m-toluidine from 330 to 190 K. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 205146.	0.7	4
93	Probing Globular Protein Self-Assembling Dynamics by Heterodyne Transient Grating Experiments. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 405.	1.3	4
94	Structural relaxation process in glass-forming liquids: A comparison between the optical Kerr effect and dielectric spectroscopy. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002, 82, 553-560.	0.6	3
95	Structural and entropic modes in supercooled liquids: experimental and theoretical investigation. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S1181-S1192.	0.7	3
96	Low-temperature supercooled phase of $\beta$ -cyclodextrin:4-methylpyridine:water mixture. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 205108.	0.7	3
97	Acoustic phenomena and hydrodynamic flow in a water filled nano-porous glass studied by transient grating spectroscopy. <i>Journal of Physics: Conference Series</i> , 2010, 214, 012032.	0.3	3
98	Investigation of Relaxation Processes in Nanocomposites by Transient Grating Experiments. <i>Materials Science Forum</i> , 0, 714, 79-83.	0.3	3
99	Confinement, entropic effects and hydrogen bond network fluctuations of water in Nafion membrane. <i>Journal of Molecular Liquids</i> , 2016, 219, 1161-1164.	2.3	3
100	Time-domain THz spectroscopy of the characteristics of hydroxyapatite provides a signature of heating in bone tissue. <i>PLoS ONE</i> , 2018, 13, e0201745.	1.1	3
101	Transient Grating Experiments in Glass-Former Liquids. , 2008, , 129-184.		3
102	Inverse freezing in molecular binary mixtures of $\beta$ -cyclodextrin and 4-methylpyridine. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 7026.	1.3	2
103	THz spectroscopy with an absolute frequency scale by a QCL phase-locked to a THz frequency comb. , 2013, , .		2
104	Diagrammatic representation of the third-order polarization in transient CARS. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1991, 13, 809-819.	0.4	1
105	Optical second harmonic generation in SmC* phase with polarization reversal. <i>Ferroelectrics</i> , 1993, 148, 349-356.	0.3	1
106	Percolation transition in water "AOT" decane microemulsion investigated by transient grating measurement. <i>Philosophical Magazine</i> , 2007, 87, 759-767.	0.7	1
107	Modification of local and collective dynamics of water in perchlorate solution, induced by pressure and concentration. <i>Journal of Molecular Liquids</i> , 2021, 337, 116273.	2.3	1
108	<title>Ultrafast dynamics of nematic liquid crystals in the isotropic phase</title>. , 1993, , .		0

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109	Structural Relaxation in Supercooled Water by Time-Resolved Spectroscopy.. ChemInform, 2004, 35, no.	0.1	0
110	Experiments and numerical simulations on lasing in random media. , 2004, , .		0
111	Phase-locking a THz quantum cascade laser to a THz comb through an all-optical beating. , 2012, , .		0
112	THz-comb-assisted molecular spectroscopy. , 2013, , .		0
113	Nucleation in Aqueous KCl Solutions Induced by Laser Pulses. Proceedings (mdpi), 2019, 26, 30.	0.2	0
114	Spin Dynamics and Phonons, Insights into Potential Molecular Qubits. Proceedings (mdpi), 2019, 26, 46.	0.2	0
115	Chaotic Behavior of Random Lasers. , 0, , 277-299.		0