

# Renaud A L VallÃ©e

## List of Publications by Year in descending order

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89  
papers

2,419  
citations

172386

29  
h-index

214721

47  
g-index

91  
all docs

91  
docs citations

91  
times ranked

2919  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | A Highly Potassium-Selective Ratiometric Fluorescent Indicator Based on BODIPY Azacrown Ether Excitable with Visible Light. <i>Organic Letters</i> , 2005, 7, 4377-4380.   | 2.4  | 297       |
| 2  | Solvent and pH Dependent Fluorescent Properties of a Dimethylaminostyryl Borondipyrromethene Dye in Solution. <i>Journal of Physical Chemistry A</i> , 2006, 110, 5998-6009.   | 1.1  | 222       |
| 3  | Upconversion superburst with sub-200 fs lifetime. <i>Nature Nanotechnology</i> , 2019, 14, 1110-1115.  | 15.6 | 130       |
| 4  | Single Molecule Lifetime Fluctuations Reveal Segmental Dynamics in Polymers. <i>Physical Review Letters</i> , 2003, 91, 038301.  | 2.9  | 104       |
| 5  | Size and segregation effects on the phase diagrams of nanoparticles of binary systems. <i>Nanotechnology</i> , 2001, 12, 68-74.  | 1.3  | 92        |
| 6  | Single-Molecule Conformations Probe Free Volume in Polymers. <i>Journal of the American Chemical Society</i> , 2004, 126, 2296-2297.   | 6.6  | 61        |
| 7  | Fluorescence Lifetimes and Emission Patterns Probe the 3D Orientation of the Emitting Chromophore in a Multichromophoric System. <i>Journal of the American Chemical Society</i> , 2004, 126, 14310-14311.                       | 6.6  | 59        |
| 8  | Controlling the Fluorescence Resonant Energy Transfer by Photonic Crystal Band Gap Engineering. <i>Chemistry of Materials</i> , 2007, 19, 5547-5552.   | 3.2  | 59        |
| 9  | A Microscopic Model for the Fluctuations of Local Field and Spontaneous Emission of Single Molecules in Disordered Media. <i>ChemPhysChem</i> , 2005, 6, 81-91.  | 1.0  | 58        |
| 10 | Visualization of Membrane Rafts Using a Perylene Monoimide Derivative and Fluorescence Lifetime Imaging. <i>Biophysical Journal</i> , 2007, 93, 2877-2891.   | 0.2  | 49        |
| 11 | Exploiting the localized surface plasmon modes in gold triangular nanoparticles for sensing applications. <i>Journal of Materials Chemistry</i> , 2012, 22, 11537.   | 6.7  | 48        |
| 12 | Multiphoton Upconversion Enhanced by Deep Subwavelength Near-Field Confinement. <i>Nano Letters</i> , 2021, 21, 3044-3051.   | 4.5  | 48        |
| 13 | Spatially Heterogeneous Dynamics in Polymer Glasses at Room Temperature Probed by Single Molecule Lifetime Fluctuations. <i>Macromolecules</i> , 2003, 36, 7752-7758.  | 2.2  | 43        |
| 14 | Probing polymers with single fluorescent molecules. <i>European Polymer Journal</i> , 2004, 40, 1001-1011.   | 2.6  | 43        |
| 15 | Optical Probing of Single Fluorescent Molecules and Proteins. <i>ChemPhysChem</i> , 2001, 2, 347-360.  | 1.0  | 41        |
| 16 | Nonlinear Optical Properties and Crystalline Orientation of 2-Methyl-4-nitroaniline Layers Grown on Nanostructured Poly(tetrafluoroethylene) Substrates. <i>Journal of the American Chemical Society</i> , 2000, 122, 6701-6709. | 6.6  | 40        |
| 17 | Fluorescent Perylene Diimide Rotaxanes: Spectroscopic Signatures of Wheel-Chromophore Interactions. <i>Chemistry - A European Journal</i> , 2007, 13, 1291-1299.   | 1.7  | 40        |
| 18 | Fluorescence Lifetime of a Single Molecule as an Observable of Meta-Basin Dynamics in Fluids Near the Glass Transition. <i>Physical Review Letters</i> , 2006, 97, 217801.   | 2.9  | 39        |

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|----|--|-----|-----------|
| 19 | Single molecule probing of the glass transition phenomenon: Simulations of several types of probes. <i>Journal of Chemical Physics</i> , 2007, 127, 154903.  | 1.2 | 38        |
| 20 | On the role of electromagnetic boundary conditions in single molecule fluorescence lifetime studies of dyes embedded in thin films. <i>Chemical Physics Letters</i> , 2001, 348, 161-167.                            | 1.2 | 37        |
| 21 | Nonexponential decay of spontaneous emission from an ensemble of molecules in photonic crystals. <i>Physical Review B</i> , 2007, 76, .  | 1.1 | 36        |
| 22 | Resonant Scattering Manipulation of Dielectric Nanoparticles. <i>Advanced Optical Materials</i> , 2021, 9, 2100112.  | 3.6 | 36        |
| 23 | Nucleation and Growth of Poly( $\mu$ -caprolactone) on Poly(tetrafluoroethylene) by in-Situ AFM. <i>Macromolecules</i> , 2002, 35, 9383-9390.  | 2.2 | 34        |
| 24 | Segment Dynamics in Thin Polystyrene Films Probed by Single-Molecule Optics. <i>Journal of the American Chemical Society</i> , 2004, 126, 4748-4749.   | 6.6 | 34        |
| 25 | Single Molecule Spectroscopy as a Probe for Dye~Polymer Interactions. <i>Journal of the American Chemical Society</i> , 2005, 127, 12011-12020.  | 6.6 | 34        |
| 26 | Effects of the Position of a Chemically or Size-Induced Planar Defect on the Optical Properties of Colloidal Crystals. <i>Journal of Physical Chemistry C</i> , 2009, 113, 14487-14492.                              | 1.5 | 34        |
| 27 | Fine tuning of emission through the engineering of colloidal crystals. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 11993.   | 1.3 | 34        |
| 28 | Spectral narrowing of emission in self-assembled colloidal photonic superlattices. <i>Journal of Applied Physics</i> , 2006, 100, 123112.  | 1.1 | 33        |
| 29 | Single Molecule Probing of the Local Segmental Relaxation Dynamics in Polymer above the Glass Transition Temperature. <i>Journal of the American Chemical Society</i> , 2009, 131, 12201-12210.                      | 6.6 | 32        |
| 30 | <i>In situ</i> tuning the optical properties of a cavity by wrinkling. <i>Applied Physics Letters</i> , 2010, 96, 043119.  | 1.5 | 29        |
| 31 | Defect Mode Passband Lasing in Self-Assembled Photonic Crystal. <i>ACS Photonics</i> , 2016, 3, 2330-2337.   | 3.2 | 29        |
| 32 | Disorder as a Playground for the Coexistence of Optical Nonlinear Effects: Competition between Random Lasing and Stimulated Raman Scattering in Complex Porous Materials. <i>ACS Photonics</i> , 2014, 1, 1206-1211. | 3.2 | 26        |
| 33 | Bulk Photodriven CO <sub>2</sub> Conversion through TiO <sub>2</sub> @Si(HIPE) Monolithic Macrocellular Foams. <i>Advanced Functional Materials</i> , 2019, 29, 1807767.   | 7.8 | 26        |
| 34 | Fluorescence lifetime fluctuations of single molecules probe local density fluctuations in disordered media: A bulk approach. <i>Journal of Chemical Physics</i> , 2005, 122, 114704.                                | 1.2 | 25        |
| 35 | Competition and Coexistence of Raman and Random Lasing in Silica/Titania-Based Solid Foams. <i>Advanced Optical Materials</i> , 2015, 3, 1640-1651.  | 3.6 | 21        |
| 36 | Fluorophores-modified silica sphere as emission probe in photonic crystals. <i>Chemical Physics Letters</i> , 2006, 421, 1-4.  | 1.2 | 18        |

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|----|---|-----|-----------|
| 37 | What can be learned from the rotational motion of single molecules in a polymer melt near the glass transition?. <i>Europhysics Letters</i> , 2007, 79, 46001.  | 0.7 | 18        |
| 38 | Tuning nanopatterns on fused silica substrates: a theoretical and experimental approach. <i>Journal of Materials Chemistry</i> , 2011, 21, 4076.  | 6.7 | 17        |
| 39 | Surface-enhanced spectroscopy on plasmonic oligomers assembled by AFM nanoxerography. <i>Nanoscale</i> , 2015, 7, 2009-2022.  | 2.8 | 17        |
| 40 | Molecular fluorescence lifetime fluctuations: on the possible role of conformational effects. <i>Chemical Physics Letters</i> , 2003, 372, 282-287.   | 1.2 | 16        |
| 41 | Probe molecules in polymer melts near the glass transition: A molecular dynamics study of chain length effects. <i>Journal of Chemical Physics</i> , 2010, 132, 034901.                               | 1.2 | 16        |
| 42 | Colocalized dark-field scattering, atomic force and surface-enhanced Raman scattering microscopic imaging of single gold nanoparticles. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 114006. | 1.0 | 15        |
| 43 | Single molecule probing of dynamics in supercooled polymers. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 1813.   | 1.3 | 14        |
| 44 | Far-field disentanglement of modes in hybrid plasmonic-photonic crystals by fluorescence nano-reporters. <i>Nanophotonics</i> , 2013, 2, 173-185.   | 2.9 | 14        |
| 45 | Tunable index metamaterials made by bottom-up approaches. <i>Nanoscale Advances</i> , 2019, 1, 1070-1076.   | 2.2 | 14        |
| 46 | Single molecule fluorescence spectroscopy of pH sensitive oligonucleotide switches. <i>Photochemical and Photobiological Sciences</i> , 2007, 6, 614-618.   | 1.6 | 12        |
| 47 | Photon transport in cylindrically-shaped disordered meso-macroporous materials. <i>Optics Express</i> , 2014, 22, 7503.   | 1.7 | 12        |
| 48 | Fluorescence lifetime fluctuations of single molecules probe the local environment of oligomers around the glass transition temperature. <i>Journal of Chemical Physics</i> , 2007, 126, 184902.      | 1.2 | 11        |
| 49 | Analysis of the exponential character of single molecule rotational correlation functions for large and small fluorescence collection angles. <i>Journal of Chemical Physics</i> , 2008, 128, 154515. | 1.2 | 11        |
| 50 | Quasi-omnidirectional total light absorption in nanostructured gold surfaces. <i>Optical Materials Express</i> , 2014, 4, 1236.   | 1.6 | 11        |
| 51 | Morphological Design of Gold Nanopillar Arrays and Their Optical Properties. <i>Journal of Physical Chemistry C</i> , 2016, 120, 1178-1185.   | 1.5 | 11        |
| 52 | Effect of solvent on nanoscale polymer heterogeneity and mobility probed by single molecule lifetime fluctuations. <i>Chemical Physics Letters</i> , 2004, 384, 5-8.                                  | 1.2 | 10        |
| 53 | Plasmonic opals: observation of a collective molecular exciton mode beyond the strong coupling. <i>Scientific Reports</i> , 2017, 7, 4107.  | 1.6 | 10        |
| 54 | Wavelength-dependent emission enhancement through the design of active plasmonic nanoantennas. <i>Optics Express</i> , 2011, 19, 17697.   | 1.7 | 9         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | DEVELOPMENT OF MAGNETIC MATERIALS FOR PHOTONIC APPLICATIONS. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2007, 16, 281-294.   | 1.1 | 8         |
| 56 | Angular Dependence of Fluorescence Emission from Quantum Dots inside a Photonic Crystal. <i>Research Letters in Nanotechnology</i> , 2008, 2008, 1-4.   | 0.3 | 8         |
| 57 | Engineering colloidal photonic crystals with magnetic functionalities. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 339, 13-19.  | 2.3 | 8         |
| 58 | Inhibition and exaltation of emission in layer-controlled colloidal photonic architectures. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 373, 1-5.                         | 2.3 | 8         |
| 59 | Polarized SERS on linear arrays of silver half-shells: SERS re-radiation modulated by local density of optical states. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 114007.                          | 1.0 | 8         |
| 60 | Shaping light spectra and field profiles in metal-coated monolayers of etched microspheres. <i>Optical Materials Express</i> , 2017, 7, 2847.   | 1.6 | 8         |
| 61 | Energy Transfer and Interference by Collective Electromagnetic Coupling. <i>Nano Letters</i> , 2019, 19, 5790-5795.   | 4.5 | 8         |
| 62 | Total Internal Reflection Tip-Enhanced Raman Spectroscopy of Cytochrome <i>c</i> . <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3835-3840.  | 2.1 | 8         |
| 63 | Morphology and NLO properties of thin films of organic compounds obtained by epitaxial growth. <i>Optical Materials</i> , 1998, 9, 423-429.   | 1.7 | 7         |
| 64 | Oriented crystallization of NLO organic materials. <i>Synthetic Metals</i> , 2001, 124, 227-232.  | 2.1 | 7         |
| 65 | SPONTANEOUS EMISSION OF NANO-ENGINEERED FLUOROPHORES IN PHOTONIC CRYSTALS. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2006, 15, 1-8.   | 1.1 | 6         |
| 66 | Nonaqueous sol-gel chemistry applied to atomic layer deposition: tuning of photonic band gap properties of silica opals. <i>Nanoscale</i> , 2010, 2, 786.   | 2.8 | 6         |
| 67 | Emitters as probes of a complex plasmo-photonic mode. <i>Journal of Materials Chemistry C</i> , 2014, 2, 10362-10368.   | 2.7 | 6         |
| 68 | Propagation and survival of frequency-bin entangled photons in metallic nanostructures. <i>Nanophotonics</i> , 2015, 4, 324-331.  | 2.9 | 6         |
| 69 | Investigation of probe molecule-polymer interactions. <i>Chemical Physics Letters</i> , 2009, 472, 48-54.   | 1.2 | 5         |
| 70 | Single Molecules Probing the Freezing of Polymer Melts: A Molecular Dynamics Study for Various Molecule-Chain Linkages. <i>Macromolecules</i> , 2010, 43, 10714-10721.  | 2.2 | 5         |
| 71 | Path-selective lasing in nanostructures based on molecular control of localized surface plasmons. <i>Nanoscale</i> , 2016, 8, 18476-18482.  | 2.8 | 5         |
| 72 | Efficient Passivation of Ag Nanowires with 11-Mercaptoundecanoic Acid Probed Using In Situ Total-Internal-Reflection Surface-Enhanced Raman Scattering Spectroscopy. <i>ChemNanoMat</i> , 2019, 5, 1044-1049. | 1.5 | 5         |

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|----|---|-----|-----------|
| 73 | Surface-enhanced fluorescence imaging on linear arrays of plasmonic half-shells. <i>Journal of Chemical Physics</i> , 2020, 153, 164701.  | 1.2 | 5         |
| 74 | Controlling the photoluminescence of CdSe/ZnS quantum dots with a magnetic field. <i>Nanotechnology</i> , 2009, 20, 135203.   | 1.3 | 4         |
| 75 | Dynamics and Stability of DNA Mechano-Nanostructures: Energy-Transfer Investigations. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1430-1435.  | 1.5 | 4         |
| 76 | Faraday rotation in magnetic colloidal photonic crystals. , 2009, , .   |     | 3         |
| 77 | Polymer-dye interactions as a tool for studying phase transitions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 338, 61-67.                              | 2.3 | 3         |
| 78 | Broadband spontaneous emission rate enhancement through the design of plasmonic nanoantennas. <i>Optical Materials Express</i> , 2012, 2, 566.  | 1.6 | 3         |
| 79 | Nano-engineering of magnetic and ellipsoidal colloidal photonic crystals. , 2009, , .   |     | 2         |
| 80 | Quasi-total omnidirectional light absorption in nanostructured gold films. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 471-475.                                 | 1.1 | 2         |
| 81 | Spectral dependence of plasmon-enhanced fluorescence in a hollow nanotriangle assembled by DNA origami: towards plasmon assisted energy transfer. <i>Nanoscale</i> , 2018, 10, 16568-16573. | 2.8 | 2         |
| 82 | SECOND-ORDER NONLINEAR OPTICAL PROPERTIES OF CHROMOPHORE-COATED PARTICLES: SYMMETRY CONSIDERATIONS. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2007, 16, 27-35.            | 1.1 | 1         |
| 83 | Scalability of transport parameters with pore sizes in isodense disordered media. <i>Europhysics Letters</i> , 2014, 107, 64003.  | 0.7 | 1         |
| 84 | Photonic bandgap engineering for spectral narrowing of emission in self-assembled colloidal photonic crystals. , 2006, , .  |     | 0         |
| 85 | Photonic superlattices for photonic crystal lasers. <i>Proceedings of SPIE</i> , 2007, , .  | 0.8 | 0         |
| 86 | Spectral narrowing of emission in self-assembled colloidal photonic superlattices. , 2007, , .  |     | 0         |
| 87 | Tuning of spontaneous emission in photonic crystals by resonant energy transfer and magnetic fields. <i>Proceedings of SPIE</i> , 2008, , .   | 0.8 | 0         |
| 88 | Photonic crystals for improved light harvesting. , 2008, , .  |     | 0         |
| 89 | Optical cavity modes in semicurved Fabry-Pérot resonators. <i>Journal of Applied Physics</i> , 2010, 108, 086109.   | 1.1 | 0         |