

# Vishal Govind Rao

## List of Publications by Year in descending order

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56  
papers

2,109  
citations

236612

25  
h-index

233125

45  
g-index

58  
all docs

58  
docs citations

58  
times ranked

2790  
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient Extraction of Energetic Charge Carriers from an Engineered Plasmonic Nanocomposite to Perform Cascade Reactions. <i>ChemNanoMat</i> , 2022, 8, .	1.5	3
2	Recent Progress and Challenges in Plasmon-Mediated Reduction of CO <sub>2</sub> to Chemicals and Fuels. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	26
3	The Pivotal Role of Hot Carriers in Plasmonic Catalysis of C-N Bond Forming Reaction of Amines. <i>Angewandte Chemie</i> , 2021, 133, 12640-12646.	1.6	10
4	The Pivotal Role of Hot Carriers in Plasmonic Catalysis of C-N Bond Forming Reaction of Amines. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12532-12538.	7.2	36
5	Plasmon-induced hot-hole generation and extraction at nano-heterointerfaces for photocatalysis. <i>Communications Materials</i> , 2021, 2, .	2.9	49
6	Unearthing the factors governing site specific rates of electronic excitations in multicomponent plasmonic systems and catalysts. <i>Faraday Discussions</i> , 2019, 214, 441-453.	1.6	24
7	Chemical Requirement for Extracting Energetic Charge Carriers from Plasmonic Metal Nanoparticles to Perform Electron-Transfer Reactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 643-647.	6.6	116
8	Catalytic conversion of solar to chemical energy on plasmonic metal nanostructures. <i>Nature Catalysis</i> , 2018, 1, 656-665.	16.1	582
9	Probing single-molecule electron-hole transfer dynamics at a molecule-NiO semiconductor nanocrystalline interface. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 17216-17223.	1.3	4
10	Electronic Coupling-Dependent Single-Molecule Interfacial Electron Transfer Dynamics in Electrostatically Attached Porphyrin on TiO <sub>2</sub> Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016, 120, 12313-12324.	1.5	3
11	Inhomogeneous and Complex Interfacial Electron-Transfer Dynamics: A Single-Molecule Perspective. <i>ACS Energy Letters</i> , 2016, 1, 773-791.	8.8	10
12	Simultaneous Spectroscopic and Topographic Imaging of Single-Molecule Interfacial Electron-Transfer Reactivity and Local Nanoscale Environment. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2221-2227.	2.1	9
13	Probing Electric Field Effect on Covalent Interactions at a Molecule-Semiconductor Interface. <i>Journal of the American Chemical Society</i> , 2016, 138, 1536-1542.	6.6	20
14	Probing Driving Force and Electron Accepting State Density Dependent Interfacial Electron Transfer Dynamics: Suppressed Fluorescence Blinking of Single Molecules on Indium Tin Oxide Semiconductor. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1685-1697.	1.2	9
15	Single-molecule interfacial electron transfer dynamics of porphyrin on TiO <sub>2</sub> nanoparticles: dissecting the interfacial electric field and electron accepting state density dependent dynamics. <i>Chemical Communications</i> , 2015, 51, 16821-16824.	2.2	22
16	Single-Molecule Interfacial Electron Transfer Dynamics of Porphyrin on TiO <sub>2</sub> Nanoparticles: Dissecting the Complex Electronic Coupling Dependent Dynamics. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20209-20221.	1.5	32
17	Phase Boundaries, Structural Characteristics, and NMR Spectra of Ionic Liquid-in-Oil Microemulsions Containing Double Chain Surface Active Ionic Liquid: A Comparative Study. <i>Journal of Physical Chemistry B</i> , 2013, 117, 1480-1493.	1.2	39
18	Zwitterionic micelles as a soft template for the extremely rapid synthesis of small hollow gold nanocontainers. <i>RSC Advances</i> , 2013, 3, 14963.	1.7	9

#	ARTICLE	IF	CITATIONS
19	Solvent and rotational relaxation of coumarin-153 and coumarin-480 in ionic liquid (1-butyl-3-methylimidazolium tetrafluoroborate) modified sodium 1,4-bis(2-ethylhexyl) sulfosuccinate (NaAOT) micelle. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013, 102, 371-378.	2.0	9
20	Effect of Alkyl Chain of Room Temperature Ionic Liquid (RTILs) on the Phase Behavior of [C <sub>2</sub> mim][C <sub>n</sub> SO <sub>4</sub> ]/TX-100/Cyclohexane Microemulsions: Solvent and Rotational Relaxation Study. <i>Journal of Physical Chemistry B</i> , 2013, 117, 5886-5897.	1.2	25
21	A Step toward the Development of High-Temperature Stable Ionic Liquid-in-Oil Microemulsions Containing Double-Chain Anionic Surface Active Ionic Liquid. <i>Journal of Physical Chemistry B</i> , 2013, 117, 7472-7480.	1.2	51
22	Modulation of the Photophysical Properties of 2,2'-Bipyridine-3,3'-diol inside Bile Salt Aggregates: A Fluorescence-based Study for the Molecular Recognition of Bile Salts. <i>Langmuir</i> , 2013, 29, 133-143.	1.6	24
23	Photoinduced electron transfer between various coumarin analogues and N,N-dimethylaniline inside niosome, a nonionic innocuous polyethylene glycol-based surfactant assembly. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 8925.	1.3	23
24	Designing a New Strategy for the Formation of IL-in-Oil Microemulsions. <i>Journal of Physical Chemistry B</i> , 2012, 116, 2850-2855.	1.2	71
25	Pluronic Micellar Aggregates Loaded with Gold Nanoparticles (Au NPs) and Fluorescent Dyes: A Study of Controlled Nanometal Surface Energy Transfer. <i>Journal of Physical Chemistry C</i> , 2012, 116, 5585-5597.	1.5	56
26	Tuning the Probe Location on Zwitterionic Micellar System with Variation of pH and Addition of Surfactants with Different Alkyl Chains: Solvent and Rotational Relaxation Studies. <i>Journal of Physical Chemistry B</i> , 2012, 116, 11313-11322.	1.2	10
27	Dynamics of Solvation and Rotational Relaxation of Coumarin 480 in Pure Aqueous-AOT Reverse Micelle and Reverse Micelle Containing Different-Sized Silver Nanoparticles Inside Its Core: A Comparative Study. <i>Journal of Physical Chemistry B</i> , 2012, 116, 3704-3712.	1.2	29
28	Ionic Liquid-in-Oil Microemulsions Composed of Double Chain Surface Active Ionic Liquid as a Surfactant: Temperature Dependent Solvent and Rotational Relaxation Dynamics of Coumarin-153 in [Py][TF <sub>2</sub> N]/[C <sub>4</sub> mim][AOT]/Benzene Microemulsions. <i>Journal of Physical Chemistry B</i> , 2012, 116, 8210-8221.	1.2	52
29	Modulation of Photophysics and Photodynamics of 1-Hydroxy-2-acetonaphthone (HAN) in Bile Salt Aggregates: A Study of Polarity and Nanoconfinement Effects. <i>Journal of Physical Chemistry B</i> , 2012, 116, 8780-8792.	1.2	19
30	Ionic-Liquid-Induced Changes in the Properties of Aqueous Zwitterionic Surfactant Solution: Solvent and Rotational Relaxation Studies. <i>Journal of Physical Chemistry B</i> , 2012, 116, 3690-3698.	1.2	6
31	Protic ionic liquid-induced changes in the properties of aqueous triton X-100 "CTAB surfactant solution: Solvent and rotational relaxation studies. <i>Chemical Physics Letters</i> , 2012, 552, 38-43.	1.2	6
32	Photophysics of 3,3'-Diethyloxadicyanone Iodide (DODCI) in Ionic Liquid Micelle and Binary Mixtures of Ionic Liquids: Effect of Confinement and Viscosity on Photoisomerization Rate. <i>Journal of Physical Chemistry B</i> , 2012, 116, 9482-9491.	1.2	11
33	Study of Fluorescence Resonance Energy Transfer in Zwitterionic Micelle: Ionic-Liquid-Induced Changes in FRET Parameters. <i>Journal of Physical Chemistry B</i> , 2012, 116, 12021-12029.	1.2	30
34	An Understanding of the Modulation of Photophysical Properties of Curcumin inside a Micelle Formed by an Ionic Liquid: A New Possibility of Tunable Drug Delivery System. <i>Journal of Physical Chemistry B</i> , 2012, 116, 3369-3379.	1.2	85
35	Aggregation Behavior of Triton X-100 with a Mixture of Two Room-Temperature Ionic Liquids: Can We Identify the Mutual Penetration of Ionic Liquids in Ionic Liquid Containing Micellar Aggregates?. <i>Journal of Physical Chemistry B</i> , 2012, 116, 13868-13877.	1.2	21
36	Photoinduced Electron Transfer in an Imidazolium Ionic Liquid and in Its Binary Mixtures with Water, Methanol, and 2-Propanol: Appearance of Marcus-Type of Inversion. <i>Journal of Physical Chemistry B</i> , 2012, 116, 1335-1344.	1.2	28

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37	The Chameleon-Like Nature of Zwitterionic Micelles: The Effect of Ionic Liquid Addition on the Properties of Aqueous Sulfobetaine Micelles. <i>ChemPhysChem</i> , 2012, 13, 1893-1901.	1.0	18
38	First resonance energy transfer among a structural isomer of adenine and various Coumarins inside a nanosized reverse micelle. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2012, 89, 67-73.	2.0	11
39	Photophysics and Photodynamics of 1-Hydroxy-2-acetonaphthone (HAN) in Micelles and Nonionic Surfactants Forming Vesicles: A Comparative Study of Different Microenvironments of Surfactant Assemblies. <i>Journal of Physical Chemistry B</i> , 2011, 115, 12108-12119.	1.2	44
40	Nanocavity Effect On Photophysical Properties Of Colchicine: A Proof by Circular Dichroism Study and Picosecond Time-Resolved Analysis in Various Reverse Micellar Assemblies. <i>Journal of Physical Chemistry B</i> , 2011, 115, 6644-6652.	1.2	6
41	Photoinduced Electron Transfer in a Room Temperature Ionic Liquid 1-Butyl-3-methylimidazolium Octyl Sulfate Micelle: A Temperature Dependent Study. <i>Journal of Physical Chemistry B</i> , 2011, 115, 6100-6110.	1.2	28
42	Solvation Dynamics and Rotational Relaxation Study Inside Niosome, A Nonionic Innocuous Poly(ethylene Glycol)-Based Surfactant Assembly: An Excitation Wavelength Dependent Experiment. <i>Journal of Physical Chemistry B</i> , 2011, 115, 12514-12520.	1.2	32
43	Solvation and Rotational Dynamics of Coumarin-153 in Ethylammonium Nitrate Containing $\beta$ -Cyclodextrin. <i>Journal of Physical Chemistry B</i> , 2011, 115, 10500-10508.	1.2	12
44	Room Temperature Ionic Liquid in Confined Media: A Temperature Dependence Solvation Study in [bmim][BF <sub>4</sub> ]/BHDC/Benzene Reverse Micelles. <i>Journal of Physical Chemistry B</i> , 2011, 115, 5971-5979.	1.2	36
45	Effects of 1-Butyl-3-methyl Imidazolium Tetrafluoroborate Ionic Liquid on Triton X-100 Aqueous Micelles: Solvent and Rotational Relaxation Studies. <i>Journal of Physical Chemistry B</i> , 2011, 115, 6957-6963.	1.2	34
46	Ionic Liquid Containing Microemulsions: Probe by Conductance, Dynamic Light Scattering, Diffusion-Ordered Spectroscopy NMR Measurements, and Study of Solvent Relaxation Dynamics. <i>Journal of Physical Chemistry B</i> , 2011, 115, 2322-2330.	1.2	57
47	The effect of membrane fluidity on FRET parameters: an energy transfer study inside small unilamellar vesicle. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 3711-3720.	1.3	34
48	Characterization of 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ([Emim][Tf <sub>2</sub> N])/TX-100/cyclohexane ternary microemulsion: Investigation of photoinduced electron transfer in this RTIL containing microemulsion. <i>Journal of Chemical Physics</i> , 2011, 134, 074507.	1.2	20
49	Ionic Liquid-Induced Changes in Properties of Aqueous Cetyltrimethylammonium Bromide: A Comparative Study of Two Protic Ionic Liquids with Different Anions. <i>Journal of Physical Chemistry B</i> , 2011, 115, 3828-3837.	1.2	38
50	Solvent and rotational relaxation study in ionic liquid containing reverse micellar system: A picosecond fluorescence spectroscopy study. <i>Chemical Physics Letters</i> , 2011, 512, 217-222.	1.2	13
51	Photoinduced intermolecular electron transfer in a room temperature imidazolium ionic liquid: An excitation wavelength dependence study. <i>Chemical Physics Letters</i> , 2011, 506, 211-216.	1.2	20
52	Synthesis of silver nanoparticle in imidazolium and pyrrolidinium based ionic liquid reverse micelles: A step forward in nanostructure inorganic material in room temperature ionic liquid field. <i>Journal of Molecular Liquids</i> , 2011, 162, 33-37.	2.3	31
53	Effect of water on the solvent relaxation dynamics in an ionic liquid containing microemulsion of 1-butyl-3-methyl imidazolium tetrafluoroborate/TritonX-100/cyclohexane. <i>Chemical Physics Letters</i> , 2010, 490, 154-158.	1.2	15
54	Solvent and rotational relaxation of Coumarin-153 in a micellar solution of a room-temperature ionic liquid, 1-butyl-3-methylimidazolium octyl sulfate, in ethylammonium nitrate. <i>Chemical Physics Letters</i> , 2010, 499, 89-93.	1.2	9

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55	Microemulsions with Surfactant TX100, Cyclohexane, and an Ionic Liquid Investigated by Conductance, DLS, FTIR Measurements, and Study of Solvent and Rotational Relaxation within this Microemulsion. Journal of Physical Chemistry B, 2010, 114, 7579-7586.	1.2	60
56	To Probe the Interaction of Methanol and Acetonitrile with the Ionic Liquid N,N,N-Trimethyl-N-propyl Ammonium Bis(trifluoromethanesulfonyl) Imide at Different Temperatures by Solvation Dynamics Study. Journal of Physical Chemistry B, 2009, 113, 8626-8634.	1.2	31