

# Murthy S Gudipati

## List of Publications by Year in descending order

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73  
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279798

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76  
docs citations

76  
times ranked

1769  
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxidant generation in the ice under electron irradiation: Simulation and application to Europa. <i>Icarus</i> , 2022, 373, 114760.	2.5	6
2	Science goals and new mission concepts for future exploration of Titan's atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). <i>Experimental Astronomy</i> , 2022, 54, 911-973.	3.7	5
3	Linking Atmospheric Chemistry of the Hot Jupiter HD 209458b to Its Formation Location through Infrared Transmission and Emission Spectra. <i>Astrophysical Journal</i> , 2022, 932, 20.	4.5	12
4	Laboratory predictions for the night-side surface ice glow of Europa. <i>Nature Astronomy</i> , 2021, 5, 276-282.	10.1	3
5	Disequilibrium Chemistry in Exoplanet Atmospheres Observed with the Hubble Space Telescope. <i>Astronomical Journal</i> , 2021, 162, 37.	4.7	22
6	Visible-light photoionization of aromatic molecules in water-ice: Organic chemistry across the universe with less energy. <i>Chemical Physics Letters</i> , 2021, 778, 138814.	2.6	6
7	The influence of Europa's plumes on its atmosphere and ionosphere. <i>Icarus</i> , 2020, 352, 113999.	2.5	5
8	Europa's surface water ice crystallinity: Discrepancy between observations and thermophysical and particle flux modeling. <i>Icarus</i> , 2020, 341, 113660.	2.5	14
9	Influence of C/O Ratio on Hot Jupiter Atmospheric Chemistry. <i>Astrophysical Journal</i> , 2020, 899, 147.	4.5	10
10	Photochemistry in Hot H <sub>2</sub> -dominated Exoplanet Atmospheres. <i>Astrophysical Journal</i> , 2019, 871, 158.	4.5	40
11	Leeb hardness of salty Europa ice analogs exposed to high-energy electrons. <i>Icarus</i> , 2019, 322, 114-120.	2.5	9
12	Photoreactivity of condensed acetylene on Titan aerosols analogues. <i>Icarus</i> , 2019, 321, 358-366.	2.5	11
13	Coulomb explosion of multiply ionized xenon in water ice. <i>Geochemical Journal</i> , 2019, 53, 69-81.	1.0	2
14	The evolution of Titan's high-altitude aerosols under ultraviolet irradiation. <i>Nature Astronomy</i> , 2018, 2, 489-494.	10.1	14
15	Photochemical Processes in CO <sub>2</sub> /H <sub>2</sub> O Ice Mixtures with Trapped Pyrene, a Model Polycyclic Aromatic Hydrocarbon. <i>Astrophysical Journal</i> , 2018, 864, 151.	4.5	6
16	UV-Vis Light-induced Aging of Titan's Haze and Ice. <i>Astrophysical Journal</i> , 2018, 852, 117.	4.5	12
17	Macromolecular organic compounds from the depths of Enceladus. <i>Nature</i> , 2018, 558, 564-568.	27.8	282
18	Stepwise heating of lunar anorthosites 60025, 60215, 65315 possibly reveals an indigenous noble gas component on the Moon. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 218, 114-131.	3.9	19

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19	Photoinduced Reversible Electron Transfer Between the Benzhydryl Radical and Benzhydryl Cation in Amorphous Water-Ice. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6405-6412.	2.5	3
20	Laboratory Studies Towards Understanding Comets. , 2017, , 101-150.		0
21	New experimental capability to investigate the hypervelocity micrometeoroid bombardment of cryogenic surfaces. <i>Review of Scientific Instruments</i> , 2016, 87, 024502.	1.3	4
22	Cometary Science with the James Webb Space Telescope. <i>Publications of the Astronomical Society of the Pacific</i> , 2016, 128, 018009.	3.1	19
23	Chapter 2 Chemistry, Thermodynamics, and Material Processes at Low Temperatures. , 2016, , 11-26.		2
24	Observing Outer Planet Satellites (Except Titan) with the James Webb Space Telescope: Science Justification and Observational Requirements. <i>Publications of the Astronomical Society of the Pacific</i> , 2016, 128, 018006.	3.1	7
25	Simulation of Titan's atmospheric photochemistry. <i>Astronomy and Astrophysics</i> , 2015, 578, A111.	5.1	15
26	DIRECT DETECTION OF COMPLEX ORGANIC PRODUCTS IN ULTRAVIOLET (Ly $\alpha$ ) AND ELECTRON-IRRADIATED ASTROPHYSICAL AND COMETARY ICE ANALOGS USING TWO-STEP LASER ABLATION AND IONIZATION MASS SPECTROMETRY. <i>Astrophysical Journal</i> , 2015, 800, 66.	4.5	61
27	Laboratory Studies Towards Understanding Comets. <i>Space Science Reviews</i> , 2015, 197, 101-150.	8.1	18
28	Mixing of the Immiscible: Hydrocarbons in Water-Ice near the Ice Crystallization Temperature. <i>Journal of Physical Chemistry A</i> , 2015, 119, 2607-2613.	2.5	26
29	Novel two-step laser ablation and ionization mass spectrometry (2S-LAIMS) of actor-spectator ice layers: Probing chemical composition of D <sub>2</sub> O ice beneath a H <sub>2</sub> O ice layer. <i>Journal of Chemical Physics</i> , 2014, 140, 104202.	3.0	7
30	Plume Composition and Evolution in Multicomponent Ices Using Resonant Two-Step Laser Ablation and Ionization Mass Spectrometry. <i>Journal of Physical Chemistry A</i> , 2014, 118, 5454-5463.	2.5	8
31	Spectroscopic studies of non-volatile residue formed by photochemistry of solid C <sub>4</sub> N <sub>2</sub> : A model of condensed aerosol formation on Titan. <i>Icarus</i> , 2014, 234, 81-90.	2.5	18
32	Complementary and Emerging Techniques for Astrophysical Ices Processed in the Laboratory. <i>Space Science Reviews</i> , 2013, 180, 101-175.	8.1	68
33	Photochemical activity of Titan's low-altitude condensed haze. <i>Nature Communications</i> , 2013, 4, 1648.	12.8	44
34	Amorphous and Crystalline H <sub>2</sub> O-Ice. <i>Astrophysics and Space Science Library</i> , 2013, , 371-408.	2.7	27
35	Chemistry in Water Ices: From Fundamentals to Planetary Applications. <i>Astrophysics and Space Science Library</i> , 2013, , 503-526.	2.7	7
36	SURVIVAL DEPTH OF ORGANICS IN ICES UNDER LOW-ENERGY ELECTRON RADIATION ( $\sim 1/2$ keV). <i>Astrophysical Journal</i> , 2012, 747, 13.	4.5	35

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37	IN-SITU PROBING OF RADIATION-INDUCED PROCESSING OF ORGANICS IN ASTROPHYSICAL ICE ANALOGS—NOVEL LASER DESORPTION LASER IONIZATION TIME-OF-FLIGHT MASS SPECTROSCOPIC STUDIES. <i>Astrophysical Journal Letters</i> , 2012, 756, L24.	8.3	61
38	Editorial for Earth, Moon, and Planets. <i>Earth, Moon and Planets</i> , 2009, 105, 1-2.	0.6	0
39	Charged polycyclic aromatic hydrocarbon clusters and the galactic extended red emission. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 5274-5278.	7.1	109
40	Double Ionization of Quaterylene (C <sub>40</sub> H <sub>20</sub> ) in Water-Ice at 20 K with Ly $\alpha$ (121.6 nm) Radiation. <i>Journal of Physical Chemistry A</i> , 2006, 110, 9020-9024.	2.5	13
41	Unusual Stability of Polycyclic Aromatic Hydrocarbon Radical Cations in Amorphous Water Ices up to 120 K: Astronomical Implications. <i>Astrophysical Journal</i> , 2006, 638, 286-292.	4.5	60
42	Matrix-Isolation in Cryogenic Water-Ices: Facile Generation, Storage, and Optical Spectroscopy of Aromatic Radical Cations. <i>Journal of Physical Chemistry A</i> , 2004, 108, 4412-4419.	2.5	46
43	Polycyclic Aromatic Hydrocarbon Ionization Energy Lowering in Water Ices. <i>Astrophysical Journal</i> , 2004, 615, L177-L180.	4.5	52
44	Facile Generation and Storage of Polycyclic Aromatic Hydrocarbon Ions in Astrophysical Ices. <i>Astrophysical Journal</i> , 2003, 596, L195-L198.	4.5	72
45	Luminescence from Vacuum-Ultraviolet-irradiated Cosmic Ice Analogs and Residues. <i>Astrophysical Journal</i> , 2003, 583, 514-523.	4.5	26
46	Endoperoxides. , 2003, , .		0
47	Temperature and Viscosity Dependence of the Spin-Directed Stereoselectivity of the Carbonyl-Alkene Photocycloaddition. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 4684-4687.	13.8	26
48	Electronic spectrum of atomic sulfur in argon matrices in the vacuum ultraviolet region. <i>Chemical Physics Letters</i> , 2001, 344, 479-487.	2.6	4
49	Temperature and Viscosity Dependence of the Spin-Directed Stereoselectivity of the Carbonyl-Alkene Photocycloaddition This work was funded by the Deutsche Forschungsgemeinschaft and the Fonds der Chemischen Industrie. S.B. thanks the Egyptian government for a Ph.D. grant.. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 4684.	13.8	1
50	Concentration dependence of the spectroscopic and photochemical properties of atomic and molecular oxygen in argon matrices. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2000, 56, 2581-2588.	3.9	5
51	Photoinduced Electron-Transfer Reactions with Quinolinic and Trimellitic Acid Imides: Experiments and Spin Density Calculations. <i>Journal of Organic Chemistry</i> , 2000, 65, 7151-7157.	3.2	16
52	Photochemically Induced Energy Transfer II: Spectroscopic and Photophysical Aspects of the Electronic-to-Electronic Energy Transfer in Geminate van der Waals Complexes. <i>Journal of Physical Chemistry A</i> , 2000, 104, 3593-3602.	2.5	6
53	Reply to the Comment on "New Assignment of the Electronically Excited States of Anthracene-9,10-endoperoxide and Its Derivatives: A Critical Experimental and Theoretical Study". <i>Journal of Physical Chemistry A</i> , 2000, 104, 166-167.	2.5	10
54	Spin-Directed Stereoselectivity of Carbonyl-Alkene Photocycloadditions. <i>Organic Letters</i> , 2000, 2, 3623-3625.	4.6	39

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55	Rydberg and charge-transfer states of atomic oxygen in Ar and Kr matrices: identification of two distinct sites. <i>Chemical Physics Letters</i> , 1999, 307, 27-34.	2.6	12
56	New Assignment of the Electronically Excited States of Anthracene-9,10-endoperoxide and Its Derivatives: A Critical Experimental and Theoretical Study. <i>Journal of Physical Chemistry A</i> , 1999, 103, 3843-3853.	2.5	23
57	Radiative and nonradiative energy transfer between CO and pyrene involving higher excited states: A Spectroscopic Analysis. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1998, 102, 249-256.	0.9	2
58	New Exciplex Emission of Pyrene and O <sub>2</sub> Co-deposited in Argon Matrices. <i>Journal of Physical Chemistry A</i> , 1998, 102, 508-510.	2.5	2
59	Photochemically Induced Electronic-To-Electronic Energy Transfer in Geminate CO $\cdot$ -O van der Waals Pair Generated through Vacuum Ultraviolet Photolysis of CO <sub>2</sub> in Ar Matrices. <i>Journal of Physical Chemistry A</i> , 1997, 101, 2003-2009.	2.5	11
60	Energy transfer involving higher excited states: a comparison between CO $\cdot$ anthracene and O <sub>2</sub> $\cdot$ anthracene in Ar matrices. <i>Chemical Physics Letters</i> , 1997, 268, 169-174.	2.6	5
61	How Predictable Are IR Transition Moment Directions? Vibrational Transitions in Propene and Deuterated Propenes. <i>Journal of the American Chemical Society</i> , 1996, 118, 10275-10284.	13.7	33
62	Photolysis of N <sub>2</sub> O at 125 nm in Ar matrices at 15 K: further evidence for the 120.7 nm band of O(3P). <i>Chemical Physics Letters</i> , 1996, 248, 452-457.	2.6	12
63	On the 1S $\cdot$ 1D emission of O by exciting O <sub>2</sub> into and beyond the Schumann-Runge continuum in Ar matrices at 15 K. <i>Chemical Physics Letters</i> , 1995, 242, 132-138.	2.6	9
64	Higher excited states of aromatic hydrocarbons. III. Assigning the in-plane polarized transitions of low-symmetry molecules: chrysene and E-stilbene. <i>Chemical Physics</i> , 1995, 192, 37-47.	1.9	29
65	Schumann-Runge bands of O <sub>2</sub> in Ar, Kr and Xe matrices revisited: potential curves of the B $\cdot$ state. <i>Chemical Physics</i> , 1995, 201, 451-462.	1.9	13
66	Exciton, Exchange, and Through-Bond Interactions in Multichromophoric Molecules: An Analysis of the Electronic Excited States. <i>The Journal of Physical Chemistry</i> , 1994, 98, 9750-9763.	2.9	35
67	Higher electronically excited states of phenanthrene, carbazole and fluorene. <i>Chemical Physics</i> , 1994, 186, 289-301.	1.9	36
68	Higher excited states of aromatic hydrocarbons: polarized VUV fluorescence-excitation spectra of anthracene and pyrene in argon matrices at 15 K using synchrotron radiation. <i>Chemical Physics</i> , 1993, 173, 143-157.	1.9	25
69	Bicyclo[3.2.2]non-1-ene: matrix isolation and spectroscopic characterization of a moderately strained bridgehead olefin. <i>Journal of Organic Chemistry</i> , 1993, 58, 3668-3674.	3.2	11
70	Excited-state behavior of 1,2-di-2-pyridyl-1,2-ethenediol (.alpha.-pyridoin) and its boric acid complexes. <i>The Journal of Physical Chemistry</i> , 1993, 97, 8602-8607.	2.9	14
71	Infrared spectra of [n]staffanes. <i>The Journal of Physical Chemistry</i> , 1992, 96, 10165-10176.	2.9	12
72	Electronic spectra of matrix-isolated tolan: site selective one- and two-photon spectra. <i>The Journal of Physical Chemistry</i> , 1992, 96, 2433-2442.	2.9	34

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73	UV absorption and luminescence spectroscopy of tetrabenzo[b,h,n,t]tetraphenylene. Chemical Physics Letters, 1992, 196, 481-485.	2.6	1