

Christopher N Shingledecker

List of Publications by Year in descending order

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Version: 2024-02-01

46
papers

1,864
citations

257450

24
h-index

345221

36
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46
all docs

46
docs citations

46
times ranked

1113
citing authors

#	ARTICLE	IF	CITATIONS
1	Dense Molecular Clouds in the Crab Supernova Remnant. <i>Astrophysical Journal</i> , 2022, 925, 59.	4.5	3
2	Interstellar detection of the highly polar five-membered ring cyanocyclopentadiene. <i>Nature Astronomy</i> , 2021, 5, 176-180.	10.1	96
3	Low-temperature gas-phase formation of indene in the interstellar medium. <i>Science Advances</i> , 2021, 7, .	10.3	42
4	An investigation of spectral line stacking techniques and application to the detection of HC11N. <i>Nature Astronomy</i> , 2021, 5, 188-196.	10.1	49
5	Ubiquitous aromatic carbon chemistry at the earliest stages of star formation. <i>Nature Astronomy</i> , 2021, 5, 181-187.	10.1	49
6	Discovery of Interstellar trans-cyanovinylacetylene ($\text{HC}\equiv\text{CCH}=\text{CHC}\equiv\text{N}$) and vinylcyanoacetylene ($\text{H}_2\text{C}=\text{CHC}\equiv\text{N}$) in GOTHAM Observations of TMC-1. <i>Astrophysical Journal Letters</i> , 2021, 908, L11.	8.3	13
7	Detection of two interstellar polycyclic aromatic hydrocarbons via spectral matched filtering. <i>Science</i> , 2021, 371, 1265-1269.	12.6	236
8	A New Method for Simulating Photoprocesses in Astrochemical Models. <i>Astrophysical Journal</i> , 2021, 910, 72.	4.5	5
9	Cyclopropenone ($\text{c-C}_3\text{H}_2\text{O}$) as a Tracer of the Nonequilibrium Chemistry Mediated by Galactic Cosmic Rays in Interstellar Ices. <i>Astrophysical Journal</i> , 2021, 911, 24.	4.5	13
10	Discovery of the Pure Polycyclic Aromatic Hydrocarbon Indene ($\text{c-C}_9\text{H}_8$) with GOTHAM Observations of TMC-1. <i>Astrophysical Journal Letters</i> , 2021, 913, L18.	8.3	96
11	Detection of interstellar $\text{H}_2\text{CCCHC}_3\text{N}$. <i>Astronomy and Astrophysics</i> , 2021, 652, L12.	5.1	18
12	A RIGOROUS K/K _A -BAND HUNT FOR AROMATIC MOLECULES (ARKHAM): UBIQUITOUS AROMATIC CARBON CHEMISTRY AT THE EARLIEST STAGES OF STAR FORMATION. , 2021, , .		0
13	INDIVIDUAL DETECTIONS OF POLYCYCLIC AROMATIC HYDROCARBONS IN TMC-1. , 2021, , .		0
14	SPECTRAL STACKING AND MATCHED FILTERING AS A RIGOROUS DETECTION TECHNIQUE FOR INTERSTELLAR MOLECULES. , 2021, , .		0
15	A SEARCH FOR LIGHT HYDRIDES IN THE ENVELOPES OF EVOLVED STARS. , 2021, , .		0
16	Isomers in Interstellar Environments. I. The Case of Z- and E-cyanomethanimine. <i>Astrophysical Journal</i> , 2020, 897, 158.	4.5	25
17	Efficient Production of S_8 in Interstellar Ices: The Effects of Cosmic-Ray-driven Radiation Chemistry and Nondiffusive Bulk Reactions. <i>Astrophysical Journal</i> , 2020, 888, 52.	4.5	45
18	The role of radiolysis in the modelling of $\text{C}_2\text{H}_4\text{O}_2$ isomers and dimethyl ether in cold dark clouds. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 500, 3414-3424.	4.4	17

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19	Cosmic-Ray Tracks in Astrophysical Ices: Modeling with the Geant4-DNA Monte Carlo Toolkit. <i>Astrophysical Journal</i> , 2020, 904, 189.	4.5	7
20	Detection of Interstellar HC ₄ NC and an Investigation of Isocyanopolyne Chemistry under TMC-1 Conditions. <i>Astrophysical Journal Letters</i> , 2020, 900, L9.	8.3	32
21	Early Science from GOTHAM: Project Overview, Methods, and the Detection of Interstellar Propargyl Cyanide (HCCCH ₂ CN) in TMC-1. <i>Astrophysical Journal Letters</i> , 2020, 900, L10.	8.3	60
22	A SEARCH FOR LIGHT HYDRIDES IN THE ENVELOPES OF EVOLVED STARS. , 2020, , .		0
23	EARLY RESULTS FROM A RIGOROUS K/K _A -BAND HUNT FOR AROMATIC MOLECULES (ARKHAM): UBIQUITOUS AROMATIC CARBON CHEMISTRY AT THE EARLIEST STAGES OF STAR FORMATION. , 2020, , .		0
24	A Search for Light Hydrides in the Envelopes of Evolved Stars. <i>Astrophysical Journal</i> , 2020, 901, 22.	4.5	2
25	The Case of H ₂ C ₃ O Isomers, Revisited: Solving the Mystery of the Missing Propadienone. <i>Astrophysical Journal</i> , 2019, 878, 80.	4.5	32
26	Searches for Interstellar HCCSH and H ₂ CCS. <i>Astrophysical Journal</i> , 2019, 883, 201.	4.5	13
27	Modeling C-shock Chemistry in Isolated Molecular Outflows. <i>Astrophysical Journal</i> , 2019, 881, 32.	4.5	24
28	On Simulating the Proton-irradiation of O ₂ and H ₂ O Ices Using Astrochemical-type Models, with Implications for Bulk Reactivity. <i>Astrophysical Journal</i> , 2019, 876, 140.	4.5	30
29	Radiation chemistry in astrochemical models: From the laboratory to the ISM. <i>Proceedings of the International Astronomical Union</i> , 2019, 15, 454-455.	0.0	0
30	Detection of the aromatic molecule benzonitrile (<i>c₆h₅cn</i>) in the interstellar medium. <i>Science</i> , 2018, 359, 202-205.	12.6	370
31	A general method for the inclusion of radiation chemistry in astrochemical models. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 5359-5367.	2.8	51
32	On Cosmic-Ray-driven Grain Chemistry in Cold Core Models. <i>Astrophysical Journal</i> , 2018, 861, 20.	4.5	76
33	First Results of an ALMA Band 10 Spectral Line Survey of NGC 6334I: Detections of Glycolaldehyde (HC(O)CH ₂ OH) and a New Compact Bipolar Outflow in HDO and CS. <i>Astrophysical Journal Letters</i> , 2018, 863, L35.	8.3	29
34	A Combined Experimental and Theoretical Study on the Formation of Interstellar Propylene Oxide (CH ₃ CHCH ₂ O) – A Chiral Molecule. <i>Astrophysical Journal</i> , 2018, 860, 108.	4.5	54
35	A new model of the chemistry of ionizing radiation in solids: CIRIS. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 11043-11056.	2.8	26
36	Detection of Interstellar HC ₅ O in TMC-1 with the Green Bank Telescope. <i>Astrophysical Journal Letters</i> , 2017, 843, L28.	8.3	36

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37	ALMA Detection of Interstellar Methoxymethanol (CH ₃ OCH ₂ OH). Astrophysical Journal Letters, 2017, 851, L46.	8.3	66
38	TIME-SENSITIVE CHEMICAL TRACERS WITHIN SHOCKED ASTROPHYSICAL SOURCES. , 2017, , .		0
39	A NEW MODEL OF THE CHEMISTRY OF IONIZING RADIATION IN SOLIDS. , 2017, , .		0
40	A study of interstellar aldehydes and enols as tracers of a cosmic ray-driven nonequilibrium synthesis of complex organic molecules. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7727-7732.	7.1	99
41	CSO AND CARMA OBSERVATIONS OF L1157. II. CHEMICAL COMPLEXITY IN THE SHOCKED OUTFLOW. Astrophysical Journal, 2016, 827, 21.	4.5	20
42	Non-detection of HC ₁₁ N towards TMC-1: constraining the chemistry of large carbon-chain molecules. Monthly Notices of the Royal Astronomical Society, 2016, 463, 4175-4183.	4.4	38
43	ON THE INFERENCE OF THE COSMIC-RAY IONIZATION RATE $\hat{\eta}$ FROM THE HCO ⁺ -to-DCO ⁺ ABUNDANCE RATIO: THE EFFECT OF NUCLEAR SPIN. Astrophysical Journal, 2016, 830, 151.	4.5	15
44	CARMA OBSERVATIONS OF L1157: CHEMICAL COMPLEXITY IN THE SHOCKED OUTFLOW. , 2016, , .		0
45	CSO AND CARMA OBSERVATIONS OF L1157. I. A DEEP SEARCH FOR HYDROXYLAMINE (NH ₂ OH). Astrophysical Journal, 2015, 812, 76.	4.5	28
46	INVESTIGATING THE MINIMUM ENERGY PRINCIPLE IN SEARCHES FOR NEW MOLECULAR SPECIES—THE CASE OF H ₂ C ₃ O ISOMERS. Astrophysical Journal, 2015, 799, 34.	4.5	49