

# Renyu Hu

## List of Publications by Year in descending order

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Version: 2024-02-01

51  
papers

3,155  
citations

218677  
26  
h-index

197818  
49  
g-index

53  
all docs

53  
docs citations

53  
times ranked

2978  
citing authors

#	ARTICLE	IF	CITATIONS
1	A nitrogen-rich atmosphere on ancient Mars consistent with isotopic evolution models. <i>Nature Geoscience</i> , 2022, 15, 106-111.	12.9	10
2	Rotation Period Detection for Earth-like Exoplanets. <i>Astronomical Journal</i> , 2022, 163, 27.	4.7	3
3	Reflected Spectroscopy of Small Exoplanets II: Characterization of Terrestrial Exoplanets. <i>Astronomical Journal</i> , 2022, 163, 299.	4.7	10
4	Starshade rendezvous: exoplanet sensitivity and observing strategy. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2021, 7, .	1.8	9
5	No Escaping Helium from 55 Cnc e*. <i>Astronomical Journal</i> , 2021, 161, 181.	4.7	36
6	Starshade exoplanet data challenge. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2021, 7, .	1.8	3
7	Long-term drying of Mars by sequestration of ocean-scale volumes of water in the crust. <i>Science</i> , 2021, 372, 56-62.	12.6	73
8	Starshade Rendezvous: exoplanet orbit constraints from multi-epoch direct imaging. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2021, 7, .	1.8	1
9	Nitrogen Fixation at Early Mars. <i>Astrobiology</i> , 2021, 21, 968-980.	3.0	10
10	Overview and reassessment of noise budget of starshade exoplanet imaging. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2021, 7, .	1.8	6
11	Reflected Spectroscopy of Small Exoplanets I: Determining the Atmospheric Composition of Sub-Neptunes Planets. <i>Astronomical Journal</i> , 2021, 162, 200.	4.7	7
12	Photochemistry and Spectral Characterization of Temperate and Gas-rich Exoplanets. <i>Astrophysical Journal</i> , 2021, 921, 27.	4.5	22
13	Unveiling Shrouded Oceans on Temperate sub-Neptunes via Transit Signatures of Solubility Equilibria versus Gas Thermochemistry. <i>Astrophysical Journal Letters</i> , 2021, 921, L8.	8.3	23
14	Detecting Biosignatures in the Atmospheres of Gas Dwarf Planets with the James Webb Space Telescope. <i>Astrophysical Journal</i> , 2021, 923, 144.	4.5	11
15	Searching for Planets Orbiting $\epsilon$ Cen A with the James Webb Space Telescope. <i>Publications of the Astronomical Society of the Pacific</i> , 2020, 132, 015002.	3.1	14
16	Phosphine as a Biosignature Gas in Exoplanet Atmospheres. <i>Astrobiology</i> , 2020, 20, 235-268.	3.0	87
17	Photochemistry of Anoxic Abiotic Habitable Planet Atmospheres: Impact of New $H_2O$ Cross Sections. <i>Astrophysical Journal</i> , 2020, 896, 148.	4.5	45
18	$O_2$ - and CO-rich Atmospheres for Potentially Habitable Environments on TRAPPIST-1 Planets. <i>Astrophysical Journal</i> , 2020, 888, 122.	4.5	29

#	ARTICLE	IF	CITATIONS
19	ExoReL : A Bayesian Inverse Retrieval Framework for Exoplanetary Reflected Light Spectra. <i>Astronomical Journal</i> , 2020, 159, 175.	4.7	21
20	Multi-orbital-phase and Multiband Characterization of Exoplanetary Atmospheres with Reflected Light Spectra. <i>Astronomical Journal</i> , 2020, 160, 206.	4.7	12
21	Absence of a thick atmosphere on the terrestrial exoplanet LHSâ3844b. <i>Nature</i> , 2019, 573, 87-90.	27.8	139
22	Empirical Predictions for the Period Distribution of Planets to Be Discovered by the <i>Transiting Exoplanet Survey Satellite</i>. <i>Astronomical Journal</i> , 2019, 158, 96.	4.7	3
23	Predicted diurnal variation of the deuterium to hydrogen ratio in water at the surface of Mars caused by mass exchange with the regolith. <i>Earth and Planetary Science Letters</i> , 2019, 519, 192-201.	4.4	8
24	Detectable Molecular Features above Hydrocarbon Haze via Transmission Spectroscopy with JWST: Case Studies of GJ 1214b-, GJ 436b-, HD 97658b-, and Kepler-51b-like Planets. <i>Astrophysical Journal Letters</i> , 2019, 876, L5.	8.3	37
25	Stability of Nitrogen in Planetary Atmospheres in Contact with Liquid Water. <i>Astrophysical Journal</i> , 2019, 886, 126.	4.5	14
26	Identifying Atmospheres on Rocky Exoplanets through Inferred High Albedo. <i>Astrophysical Journal</i> , 2019, 886, 141.	4.5	37
27	Information in the Reflected-light Spectra of Widely Separated Giant Exoplanets. <i>Astrophysical Journal</i> , 2019, 887, 166.	4.5	15
28	Exoplanet Biosignatures: A Review of Remotely Detectable Signs of Life. <i>Astrobiology</i> , 2018, 18, 663-708.	3.0	328
29	The MUSCLES Treasury Survey. V. FUV Flares on Active and Inactive M Dwarfs* â€ â€€. <i>Astrophysical Journal</i> , 2018, 867, 71.	4.5	95
30	Using Deep Space Climate Observatory Measurements to Study the Earth as an Exoplanet. <i>Astronomical Journal</i> , 2018, 156, 26.	4.7	37
31	A Framework for Prioritizing the <i>TESS</i> Planetary Candidates Most Amenable to Atmospheric Characterization. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 114401.	3.1	314
32	The Transiting Exoplanet Community Early Release Science Program for <i>JWST</i>. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 114402.	3.1	100
33	Photochemical Oxygen in Non-1-bar CO<sub>2</sub> Atmospheres of Terrestrial Exoplanets. <i>Astrophysical Journal</i> , 2018, 867, 17.	4.5	8
34	Baseline requirements for detecting biosignatures with the HabEx and LUVOIR mission concepts. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2018, 4, 1.	1.8	14
35	Observing Exoplanets with High Dispersion Coronagraphy. I. The Scientific Potential of Current and Next-generation Large Ground and Space Telescopes. <i>Astronomical Journal</i> , 2017, 153, 183.	4.7	99
36	A Case for an Atmosphere on Super-Earth 55 Cancri e. <i>Astronomical Journal</i> , 2017, 154, 232.	4.7	78

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37	Baseline requirements for detecting biosignatures with the HabEx and LUVOIR mission concepts. , 2017, , .		3
38	THE MUSCLES TREASURY SURVEY. III. X-RAY TO INFRARED SPECTRA OF 11 M AND K STARS HOSTING PLANETS. Astrophysical Journal, 2016, 824, 102.	4.5	153
39	A map of the large dayâ€“night temperature gradient of a super-Earth exoplanet. Nature, 2016, 532, 207-209.	27.8	225
40	High-contrast imaging and high-resolution spectroscopy observation of exoplanets. Proceedings of SPIE, 2016, , .	0.8	4
41	STUDYING ATMOSPHERE-DOMINATED HOT JUPITER<i>KEPLER</i>PHASE CURVES: EVIDENCE THAT INHOMOGENEOUS ATMOSPHERIC REFLECTION IS COMMON. Astronomical Journal, 2015, 150, 112.	4.7	81
42	A SEMI-ANALYTICAL MODEL OF VISIBLE-WAVELENGTH PHASE CURVES OF EXOPLANETS AND APPLICATIONS TO KEPLER- 7 B AND KEPLER- 10 B. Astrophysical Journal, 2015, 802, 51.	4.5	80
43	Tracing the fate of carbon and the atmospheric evolution of Mars. Nature Communications, 2015, 6, 10003.	12.8	90
44	HELIUM ATMOSPHERES ON WARM NEPTUNE- AND SUB-NEPTUNE-SIZED EXOPLANETS AND APPLICATIONS TO GJ 436b. Astrophysical Journal, 2015, 807, 8.	4.5	80
45	STABILITY OF CO<sub>2</sub>ATMOSPHERES ON DESICCATED M DWARF EXOPLANETS. Astrophysical Journal, 2015, 806, 249.	4.5	104
46	Photochemistry of Terrestrial Exoplanet Atmospheres. , 2015, , 291-308.		0
47	PHOTOCHEMISTRY IN TERRESTRIAL EXOPLANET ATMOSPHERES. III. PHOTOCHEMISTRY AND THERMOCHEMISTRY IN THICK ATMOSPHERES ON SUPER EARTHS AND MINI NEPTUNES. Astrophysical Journal, 2014, 784, 63.	4.5	151
48	PHOTOCHEMISTRY IN TERRESTRIAL EXOPLANET ATMOSPHERES. II. H<sub>2</sub>S AND SO<sub>2</sub>PHOTOCHEMISTRY IN ANOXIC ATMOSPHERES. Astrophysical Journal, 2013, 769, 6.	4.5	119
49	THEORETICAL SPECTRA OF TERRESTRIAL EXOPLANET SURFACES. Astrophysical Journal, 2012, 752, 7.	4.5	90
50	The Exoplanet Characterization Observatory (EChO): performance model<i>EclipseSim</i>and applications. Proceedings of SPIE, 2012, , .	0.8	1
51	PHOTOCHEMISTRY IN TERRESTRIAL EXOPLANET ATMOSPHERES. I. PHOTOCHEMISTRY MODEL AND BENCHMARK CASES. Astrophysical Journal, 2012, 761, 166.	4.5	215