Audrey Coutens

List of Publications by Year
in descending order

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83	4,463	76326	102487
papers	citations	40	66
		h-index	g-index

83	83	83	1865
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The ALMA Protostellar Interferometric Line Survey (PILS). Astronomy and Astrophysics, 2016, 595, A117.	5.1	267
2	Change in the chemical composition of infalling gas forming a disk around a protostar. Nature, 2014, 507, 78-80.	27.8	196
3	Interstellar OH⁺, H₂O⁺and H₃O⁺along the sight-line to G10.6â€“0.4. Astronomy and Astrophysics, 2010, 518, L110.	5.1	155
4	Herschel/HIFI observations of interstellar OH⁺and H₂O⁺towards W49N: a probe of diffuse clouds with a small molecular fraction. Astronomy and Astrophysics, 2010, 521, L10.	5.1	143
5	TIMASSS: the IRASÂ16293-2422 millimeter and submillimeter spectral survey. Astronomy and Astrophysics, 2011, 532, A23.	5.1	133
6	The ALMA-PILS survey: isotopic composition of oxygen-containing complex organic molecules toward IRAS 16293â€“2422B. Astronomy and Astrophysics, 2018, 620, A170.	5.1	124
7	Seeds Of Life In Space (SOLIS): The Organic Composition Diversity at 300â€“1000 au Scale in Solar-type Star-forming Regions[*]. Astrophysical Journal, 2017, 850, 176.	4.5	116
8	A study of deuterated water in the low-mass protostar IRASÂ16293-2422. Astronomy and Astrophysics, 2012, 539, A132.	5.1	111
9	The ALMA-PILS survey: First detections of deuterated formamide and deuterated isocyanic acid in the interstellar medium. Astronomy and Astrophysics, 2016, 590, L6.	5.1	106
10	Herschelspectral surveys of star-forming regions. Astronomy and Astrophysics, 2010, 521, L22.	5.1	99
11	Seeds of Life in Space (SOLIS). Astronomy and Astrophysics, 2017, 605, L3.	5.1	98
12	Water in star-forming regions: physics and chemistry from clouds to disks as probed by Herschel spectroscopy. Astronomy and Astrophysics, 2021, 648, A24.	5.1	98
13	The CHESS spectral survey of star forming regions: Peering into the protostellar shock L1157-B1. Astronomy and Astrophysics, 2010, 518, L112.	5.1	97
14	A CHEMICAL VIEW OF PROTOSTELLAR-DISK FORMATION IN L1527. Astrophysical Journal Letters, 2014, 791, L38.	8.3	93
15	Detection of hydrogen fluoride absorption in diffuse molecular clouds withHerschel/HIFI: an ubiquitous tracer of molecular gas. Astronomy and Astrophysics, 2010, 521, L12.	5.1	92
16	Strong absorption by interstellar hydrogen fluoride:Herschel/HIFI observations of the sight-line to G10.6â€“0.4 (W31C). Astronomy and Astrophysics, 2010, 518, L108.	5.1	90
17	The ALMA-PILS survey: First detections of ethylene oxide, acetone and propanal toward the low-mass protostar IRAS 16293-2422. Astronomy and Astrophysics, 2017, 597, A53.	5.1	89
18	Protostellar and cometary detections of organohalogens. Nature Astronomy, 2017, 1, 703-708.	10.1	89

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19	The ALMA-PILS survey: inventory of complex organic molecules towards IRAS 16293â€“2422 A. Astronomy and Astrophysics, 2020, 635, A48.	5.1	87
20	Herschel/HIFI discovery of interstellar chloronium (H₂Cl⁺). Astronomy and Astrophysics, 2010, 521, L9.	5.1	83
21	The ALMA-PILS survey: detection of CH3NCO towards the low-mass protostar IRAS 16293â˜’2422 and laboratory constraints on its formation. Monthly Notices of the Royal Astronomical Society, 2017, 469, 2219-2229.	4.4	83
22	Chemical modelling of complex organic molecules with peptide-like bonds in star-forming regions. Monthly Notices of the Royal Astronomical Society, 2018, 474, 2796-2812.	4.4	79
23	Detection of interstellar oxidaniumyl: Abundant H₂O⁺towards the star-forming regions DR21, SgrÂB2, and NGC6334. Astronomy and Astrophysics, 2010, 518, L111.	5.1	78
24	Interstellar CH absorption in the diffuse interstellar medium along the sight-lines to G10.6â€“0.4 (W31C), W49N, and W51. Astronomy and Astrophysics, 2010, 521, L16.	5.1	77
25	The ALMA-PILS survey: complex nitriles towards IRAS 16293â€“2422. Astronomy and Astrophysics, 2018, 616, A90.	5.1	77
26	HERSCHEL /HIFI DISCOVERY OF HCL ⁺ IN THE INTERSTELLAR MEDIUM. Astrophysical Journal Letters, 2012, 751, L37.	8.3	75
27	The ALMA-PILS survey: the sulphur connection between protostars and comets: IRAS 16293â€“2422 B and 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2018, 476, 4949-4964.	4.4	74
28	Nitrogen hydrides in interstellar gas. Astronomy and Astrophysics, 2010, 521, L45.	5.1	68
29	Nitrogen hydrides in interstellar gas. Astronomy and Astrophysics, 2012, 543, A145.	5.1	66
30	The CHESS spectral survey of star forming regions: Peering into the protostellar shock L1157-B1. Astronomy and Astrophysics, 2010, 518, L113.	5.1	61
31	The ALMA-PILS Survey: Formaldehyde deuteration in warm gas on small scales toward IRAS 16293â€“2422 B. Astronomy and Astrophysics, 2018, 610, A54.	5.1	58
32	Herschel/HIFI measurements of the ortho/para ratio in water towards SagittariusÂB2(M) and W31C. Astronomy and Astrophysics, 2010, 521, L26.	5.1	57
33	Nitrogen hydrides in the cold envelope of IRASÂ16293-2422. Astronomy and Astrophysics, 2010, 521, L52.	5.1	56
34	Thermal Desorption of Interstellar Ices: A Review on the Controlling Parameters and Their Implications from Snowlines to Chemical Complexity. ACS Earth and Space Chemistry, 2022, 6, 597-630.	2.7	55
35	Seeds of Life in Space (SOLIS). Astronomy and Astrophysics, 2017, 605, A57.	5.1	54
36	Detection of glycolaldehyde toward the solar-type protostar NGC 1333 IRAS2A. Astronomy and Astrophysics, 2015, 576, A5.	5.1	51

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37	CH⁺(1â€“0) and¹³CH⁺(1â€“0) absorption lines in the direction of massive star-forming regions. Astronomy and Astrophysics, 2010, 521, L15.	5.1	49
38	First detection of cyanamide (NH₂CN) towards solar-type protostars. Astronomy and Astrophysics, 2018, 612, A107.	5.1	44
39	The ALMA-PILS survey: 3D modeling of the envelope, disks and dust filament of IRAS 16293â€“2422. Astronomy and Astrophysics, 2018, 612, A72.	5.1	43
40	The ALMA-PILS survey: Stringent limits on small amines and nitrogen-oxides towards IRAS 16293â€“2422B. Astronomy and Astrophysics, 2018, 619, A28.	5.1	42
41	First detection of ND in the solar-mass protostar IRAS16293-2422. Astronomy and Astrophysics, 2010, 521, L42.	5.1	41
42	Ortho-to-para ratio of interstellar heavy water. Astronomy and Astrophysics, 2010, 521, L31.	5.1	40
43	The ALMA-PILS survey: the first detection of doubly deuterated methyl formate (CHD₂OCHO) in the ISM. Astronomy and Astrophysics, 2019, 623, A69.	5.1	39
44	HIGH D ₂ O/HDO RATIO IN THE INNER REGIONS OF THE LOW-MASS PROTOSTAR NGC 1333 IRAS2A. Astrophysical Journal Letters, 2014, 792, L5.	8.3	37
45	The ALMA-PILS survey: First detection of nitrous acid (HONO) in the interstellar medium. Astronomy and Astrophysics, 2019, 623, L13.	5.1	37
46	Deuterated water in the solar-type protostars NGC 1333 IRAS 4A and IRAS 4B. Astronomy and Astrophysics, 2013, 560, A39.	5.1	35
47	Rotational spectroscopy, dipole moment and 14N nuclear hyperfine structure of iso-propyl cyanide. Journal of Molecular Spectroscopy, 2011, 267, 100-107.	1.2	34
48	WATER DEUTERIUM FRACTIONATION IN THE INNER REGIONS OF TWO SOLAR-TYPE PROTOSTARS. Astrophysical Journal Letters, 2013, 768, L29.	8.3	33
49	Chemical modelling of water deuteration in IRAS16293-2422. Monthly Notices of the Royal Astronomical Society, 2014, 445, 2854-2871.	4.4	31
50	The ALMA-PILS survey: first detection of methyl isocyanide (CH₃NC) in a solar-type protostar. Astronomy and Astrophysics, 2018, 617, A95.	5.1	31
51	Excitation and abundance of C₃in star forming cores. Astronomy and Astrophysics, 2010, 521, L13.	5.1	30
52	The distribution of water in the high-mass star-forming region NGCÂ6334ÂI. Astronomy and Astrophysics, 2010, 521, L28.	5.1	30
53	ALMA observations of water deuteration: a physical diagnostic of the formation of protostars. Astronomy and Astrophysics, 2019, 631, A25.	5.1	29
54	Heavy water stratification in a low-mass protostar. Astronomy and Astrophysics, 2013, 553, A75.	5.1	29

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55	Water deuterium fractionation in the high-mass star-forming region G34.26+0.15 based on Herschel/HIFI data. Monthly Notices of the Royal Astronomical Society, 2014, 445, 1299-1313.	4.4	28
56	The ALMA-PILS survey: first detection of the unsaturated 3-carbon molecules Propenal (C₂H₃CHO) and Propylene (C₃H₆) towards IRAS 16293â€“2422 B. Astronomy and Astrophysics, 2021, 645, A53.	5.1	28
57	The ALMA-PILS survey: gas dynamics in IRAS 16293â˜’2422 and the connection between its two protostars. Astronomy and Astrophysics, 2019, 626, A93.	5.1	27
58	PDRs4All: A JWST Early Release Science Program on Radiative Feedback from Massive Stars. Publications of the Astronomical Society of the Pacific, 2022, 134, 054301.	3.1	26
59	Methyl isocyanate (CH3NCO): an important missing organic in current astrochemical networks. Monthly Notices of the Royal Astronomical Society: Letters, 2018, 473, L59-L63.	3.3	23
60	Linking interstellar and cometary O₂: a deep search for ¹⁶O¹⁸O in the solar-type protostar IRAS 16293â€“2422. Astronomy and Astrophysics, 2018, 618, A11.	5.1	22
61	ALMA observations of doubly deuterated water: inheritance of water from the prestellar environment. Astronomy and Astrophysics, 2021, 650, A172.	5.1	22
62	Chemical modelling of glycolaldehyde and ethylene glycol in star-forming regions. Monthly Notices of the Royal Astronomical Society, 2018, 475, 2016-2026.	4.4	21
63	Methyl cyanide (CH3CN) and propyne (CH3CCH) in the low-mass protostar IRAS 16293â€“2422. Monthly Notices of the Royal Astronomical Society, 2018, 481, 5651-5659.	4.4	20
64	The prebiotic molecular inventory of Serpens SMM1. Astronomy and Astrophysics, 2021, 647, A87.	5.1	17
65	The methanol lines and hot core of OMC2-FIR4, an intermediate-mass protostar, withHerschel/HIFI. Astronomy and Astrophysics, 2010, 521, L39.	5.1	16
66	Herschel/HIFI observations of spectrally resolved methylidyne signatures toward the high-mass star-forming core NGCâ€‰6334I. Astronomy and Astrophysics, 2010, 521, L43.	5.1	14
67	The ALMA-PILS survey: propyne (CH₃CCH) in IRAS 16293â€“2422. Astronomy and Astrophysics, 2019, 631, A137.	5.1	13
68	Protoplanetary discs: sensitivity of the chemical composition to various model parameters. Monthly Notices of the Royal Astronomical Society, 2019, 484, 1563-1573.	4.4	13
69	On the accretion process in a high-mass star forming region. Astronomy and Astrophysics, 2016, 585, A158.	5.1	12
70	Successive deuteration in low-mass star-forming regions: The case of D₂-methanol (CHD₂OH) in IRAS 16293-2422. Astronomy and Astrophysics, 2022, 659, A69.	5.1	12
71	The Prebiotic Molecular Inventory of Serpens SMM1: II. The Building Blocks of Peptide Chains. ACS Earth and Space Chemistry, 2022, 6, 455-467.	2.7	11
72	The ALMA-PILS survey: First tentative detection of 3-hydroxypropenal (HOCHCHCHO) in the interstellar medium and chemical modeling of the C₃H₄O₂ isomers. Astronomy and Astrophysics, 2022, 660, L6.	5.1	11

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73	Chemical evolution during the formation of a protoplanetary disk. Astronomy and Astrophysics, 2020, 643, A108.	5.1	10
74	A study of methanol and silicon monoxide production through episodic explosions of grain mantles in the Central Molecular Zone. Monthly Notices of the Royal Astronomical Society, 0, , stx119.	4.4	8
75	VLA cm-wave survey of young stellar objects in the Oph A cluster: constraining extreme UV- and X-ray-driven disk photoevaporation. Astronomy and Astrophysics, 2019, 631, A58.	5.1	6
76	Laboratory spectroscopic study of the ¹⁵N isotopomers of cyanamide, H₂NCN, and a search for them toward IRAS 16293â˜’2422 B. Astronomy and Astrophysics, 2019, 623, A93.	5.1	5
77	Physicochemical models: source-tailored or generic?. Monthly Notices of the Royal Astronomical Society, 2020, 498, 276-291.	4.4	4
78	An unbiased NOEMA 2.6 to 4 mm survey of the GG Tau ring: First detection of CCS in a protoplanetary disk. Astronomy and Astrophysics, 2021, 653, L5.	5.1	4
79	New constraints on the initial parameters of low-mass star formation from chemical modeling. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	1
80	Ethylene Glycol (HOCH2CH2OH). , 2021, , 1-2.		0
81	On the formation of deuterated methyl formate in hot corinos. Monthly Notices of the Royal Astronomical Society, 2021, 506, 1019-1030.	4.4	0
82	Chloromethane (CH3Cl). , 2018, , 1-1.		0
83	IRAS16293-2422. , 2019, , 1-3.		0