Karl M Menten

List of Publications by Citations

266 papers	12,919 citations	56 h-index	105 g-index
267 ext. papers	16,428 ext. citations	6.5 avg, IF	5.99 L-index

#	Paper	IF	Citations
266	First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole. *Astrophysical Journal Letters*, **2019**, 875, L1	7.9	1110
265	First M87 Event Horizon Telescope Results. VI. The Shadow and Mass of the Central Black Hole. *Astrophysical Journal Letters*, **2019**, 875, L6	7.9	466
264	First M87 Event Horizon Telescope Results. V. Physical Origin of the Asymmetric Ring. *Astrophysical Journal Letters*, **2019**, 875, L5	7.9	429
263	First M87 Event Horizon Telescope Results. IV. Imaging the Central Supermassive Black Hole. *Astrophysical Journal Letters*, **2019**, 875, L4	7.9	411
262	The Atacama Pathfinder EXperiment (APEX) □a new submillimeter facility for southern skies □ *Astronomy and Astrophysics*, **2006**, 454, L13-L16	5.1	353
261	First M87 Event Horizon Telescope Results. II. Array and Instrumentation. *Astrophysical Journal Letters*, **2019**, 875, L2	7.9	325
260	The discovery of a new, very strong, and widespread interstellar methanol maser line. *Astrophysical Journal*, **1991**, 380, L75	4.7	305
259	STAR FORMATION AND GAS KINEMATICS OF QUASAR HOST GALAXIES ATz~ 6: NEW INSIGHTS FROM ALMA. *Astrophysical Journal*, **2013**, 773, 44	4.7	272
258	First M87 Event Horizon Telescope Results. III. Data Processing and Calibration. *Astrophysical Journal Letters*, **2019**, 875, L3	7.9	267
257	Resolved Molecular Gas in a Quasar Host Galaxy at Redshift [FORMULA][F]z=6.42[/F][/FORMULA]. *Astrophysical Journal*, **2004**, 615, L17-L20	4.7	264
256	Molecular gas in the host galaxy of a quasar at redshift z = 6.42. *Nature*, **2003**, 424, 406-8	50.4	234
255	Spiral density waves in a young protoplanetary disk. *Science*, **2016**, 353, 1519-1521	33.3	210
254	The intense starburst HDF 850.1 in a galaxy overdensity at z □5.2 in the Hubble Deep Field. *Nature*, **2012**, 486, 233-6	50.4	190
253	MOLECULAR GAS INz~ 6 QUASAR HOST GALAXIES. *Astrophysical Journal*, **2010**, 714, 699-712	4.7	186
252	Trigonometric Parallaxes of High-mass Star-forming Regions: Our View of the Milky Way. *Astrophysical Journal*, **2019**, 885, 131	4.7	176
251	Interstellar Hydroxyl Masers in the Galaxy. I. The VLA Survey. *Astrophysical Journal, Supplement Series*, **2000**, 129, 159-227	8	168
250	Radio Photospheres of Long-Period Variable Stars. *Astrophysical Journal*, **1997**, 476, 327-346	4.7	166

249	What is powering the Orion Kleinmann-low infrared nebula. *Astrophysical Journal*, **1995**, 445, L157	4.7	161
248	Detection of a branched alkyl molecule in the interstellar medium: iso-propyl cyanide. *Science*, **2014**, 345, 1584-7	33.3	159
247	A PARALLAX-BASED DISTANCE ESTIMATOR FOR SPIRAL ARM SOURCES. *Astrophysical Journal*, **2016**, 823, 77	4.7	148
246	CO(10) inz? 4 Quasar Host Galaxies: No Evidence for Extended Molecular Gas Reservoirs. *Astrophysical Journal*, **2006**, 650, 604-613	4.7	131
245	Dense gas in the Galactic central molecular zone is warm and heated by turbulence. *Astronomy and Astrophysics*, **2016**, 586, A50	5.1	128
244	The Position of Sagittarius A*: Accurate Alignment of the Radio and Infrared Reference Frames at the Galactic Center. *Astrophysical Journal*, **1997**, 475, L111-L114	4.7	123
243	Thermal Emission from Warm Dust in the Most Distant Quasars. *Astrophysical Journal*, **2008**, 687, 848-858	4.7	123
242	A hot compact dust disk around a massive young stellar object. *Nature*, **2010**, 466, 339-42	50.4	106
241	The nature of the [C ii] emission in dusty star-forming galaxies from the SPT survey. *Monthly Notices of the Royal Astronomical Society*, **2015**, 449, 2883-2900	4.3	102
240	A stringent limit on a drifting proton-to-electron mass ratio from alcohol in the early universe. *Science*, **2013**, 339, 46-8	33.3	100
239	Hot Gas and Dust in a Protostellar Cluster near W3(OH). *Astrophysical Journal*, **1999**, 514, L43-L46	4.7	100
238	THE VLA VIEW OF THE HL TAU DISK: DISK MASS, GRAIN EVOLUTION, AND EARLY PLANET FORMATION. *Astrophysical Journal Letters*, **2016**, 821, L16	7.9	97
237	The Event Horizon General Relativistic Magnetohydrodynamic Code Comparison Project. *Astrophysical Journal, Supplement Series*, **2019**, 243, 26	8	96
236	High-Resolution Imaging of Molecular Line Emission from High-Redshift QSO[CLC]s[/CLC]. *Astronomical Journal*, **2002**, 123, 1838-1846	4.9	96
235	THE REDSHIFT DISTRIBUTION OF DUSTY STAR-FORMING GALAXIES FROM THE SPT SURVEY. *Astrophysical Journal*, **2016**, 822, 80	4.7	92
234	EXPLOSIVE DISINTEGRATION OF A MASSIVE YOUNG STELLAR SYSTEM IN ORION. *Astrophysical Journal*, **2009**, 704, L45-L48	4.7	91
233	Astrophysical detection of the helium hydride ion HeH. *Nature*, **2019**, 568, 357-359	50.4	87
232	AN ALMA SURVEY OF SUBMILLIMETER GALAXIES IN THE EXTENDED CHANDRA DEEP FIELD SOUTH: NEAR-INFRARED MORPHOLOGIES AND STELLAR SIZES. *Astrophysical Journal*, **2015**, 799, 194	4.7	86

231	Redshifted Neutral Hydrogen 21 Centimeter Absorption toward Red Quasars. *Astrophysical Journal* , **1998**, 494, 175-182	4.7	86
230	SHORT DISSIPATION TIMES OF PROTO-PLANETARY DISKS: AN ARTIFACT OF SELECTION EFFECTS?. *Astrophysical Journal Letters*, **2014**, 793, L34	7.9	85
229	ISM Properties of a Massive Dusty Star-forming Galaxy Discovered at z ~ 7. *Astrophysical Journal Letters*, **2017**, 842, L15	7.9	84
228	H2D(+) observations give an age of at least one million years for a cloud core forming Sun-like stars. *Nature*, **2014**, 516, 219-21	50.4	84
227	IMAGING ATOMIC AND HIGHLY EXCITED MOLECULAR GAS IN az= 6.42 QUASAR HOST GALAXY: COPIOUS FUEL FOR AN EDDINGTON-LIMITED STARBURST AT THE END OF COSMIC REIONIZATION. *Astrophysical Journal*, **2009**, 703, 1338-1345	4.7	83
226	Monitoring the Large Proper Motions of Radio Sources in the Orion BN/KL Region. *Astrophysical Journal*, **2008**, 685, 333-343	4.7	82
225	FAR-INFRARED AND MOLECULAR CO EMISSION FROM THE HOST GALAXIES OF FAINT QUASARS ATz~ 6. *Astronomical Journal*, **2011**, 142, 101	4.9	80
224	Physical Parameters of the IRC +10216 Circumstellar Envelope: New Constraints from Submillimeter Observations. *Astrophysical Journal*, **1997**, 483, 913-924	4.7	78
223	The LABOCA survey of the Extended Chandra Deep Field-South - radio and mid-infrared counterparts to submillimetre galaxies. *Monthly Notices of the Royal Astronomical Society*, **2011**, 413, 2314-2338	4.3	77
222	An ALMA Survey of Submillimeter Galaxies in the ExtendedChandraDeep Field South: Spectroscopic Redshifts. *Astrophysical Journal*, **2017**, 840, 78	4.7	74
221	Interstellar Hydroxyl Masers in the Galaxy. II. Zeeman Pairs and the Galactic Magnetic Field. *Astrophysical Journal*, **2003**, 596, 328-343	4.7	72
220	Detection of widespread strong methanol masers at 44 GHz. *Astrophysical Journal*, **1990**, 354, 556	4.7	72
219	First M87 Event Horizon Telescope Results. VIII. Magnetic Field Structure near The Event Horizon. *Astrophysical Journal Letters*, **2021**, 910, L13	7.9	70
218	Millimeter and Radio Observations ofz~ 6 Quasars. *Astronomical Journal*, **2007**, 134, 617-627	4.9	68
217	Properties of Millimeter Galaxies: Constraints fromK-Band Blank Fields. *Astrophysical Journal*, **2002**, 573, 473-484	4.7	63
216	Submillimeter water masers. *Astrophysical Journal*, **1990**, 350, L41	4.7	62
215	DENSE GAS TRACERS AND STAR FORMATION LAWS IN ACTIVE GALAXIES: APEX SURVEY OF HCN J = 4 -j3, HCO + J = 4 -j3, AND CS J = 7 -j6. *Astrophysical Journal Letters*, **2014**, 784, L31	7.9	61
214	A new submillimeter water maser transition at 325 GHz. *Astrophysical Journal*, **1990**, 363, L27	4.7	60

213	The Synchrotron Jet from the H2O Maser Source in W3(OH). *Astrophysical Journal*, **1999**, 513, 775-779	4.7	60
212	ALMA Reveals Potential Evidence for Spiral Arms, Bars, and Rings in High-redshift Submillimeter Galaxies. *Astrophysical Journal*, **2019**, 876, 130	4.7	58
211	First M87 Event Horizon Telescope Results. VII. Polarization of the Ring. *Astrophysical Journal Letters*, **2021**, 910, L12	7.9	58
210	H2O emission in high-zultra-luminous infrared galaxies. *Astronomy and Astrophysics*, **2013**, 551, A115	5.1	56
209	A RING/DISK/OUTFLOW SYSTEM ASSOCIATED WITH W51 NORTH: A VERY MASSIVE STAR IN THE MAKING. *Astrophysical Journal*, **2009**, 698, 1422-1428	4.7	56
208	Infrared Space ObservatoryLong Wavelength Spectrometer Observations of a Cold Giant Molecular Cloud Core near the Galactic Center. *Astrophysical Journal*, **1998**, 507, 794-804	4.7	56
207	Discovery of Strong Vibrationally Excited Water Masers at 658 GH[CLC]z[/CLC] toward Evolved Stars. *Astrophysical Journal*, **1995**, 450, L67-L70	4.7	56
206	Mapping spiral structure on the far side of the Milky Way. *Science*, **2017**, 358, 227-230	33.3	55
205	AN INTERFEROMETRIC SPECTRAL-LINE SURVEY OF IRC+10216 IN THE 345 GHz BAND. *Astrophysical Journal, Supplement Series*, **2011**, 193, 17	8	55
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203	44 GHz Methanol Masers and Quasi-thermal Emission in Sagittarius B2. *Astrophysical Journal*, **1997**, 474, 346-361	4.7	53
202	GRB 120521C ATz~ 6 AND THE PROPERTIES OF HIGH-REDSHIFT □RAY BURSTS. *Astrophysical Journal*, **2014**, 781, 1	4.7	51
201	The rate and latency of star formation in dense, massive clumps in the Milky Way. *Astronomy and Astrophysics*, **2016**, 588, A29	5.1	51
200	The local spiral structure of the Milky Way. *Science Advances*, **2016**, 2, e1600878	14.3	50
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198	Rotational spectroscopy of isotopic vinyl cyanide, H2CCHCN, in the laboratory and in space. *Journal of Molecular Spectroscopy*, **2008**, 251, 319-325	1.3	50
197	New Insights on the Dense Molecular Gas in NGC 253 as Traced by HCN and HCO+. *Astrophysical Journal*, **2007**, 666, 156-164	4.7	49
196	Detection of a strong new maser line of methanol toward DR 21(OH). *Astrophysical Journal*, **1988**, 329, L117	4.7	48

195	Formaldehyde Densitometry of Starburst Galaxies. *Astrophysical Journal*, **2008**, 673, 832-846	4.7	47
194	Discovery of Interstellar Water Lines at 437, 439, and 471 GHz: Strong Case for Water Maser Formation behind C-Type Shocks. *Astrophysical Journal*, **1993**, 416, L37	4.7	47
193	Detection of 1.6 □10 10 M ? of Molecular Gas in the Host Galaxy of the z = 5.77 SDSS Quasar J0927+2001. *Astrophysical Journal*, **2007**, 666, L9-L12	4.7	45
192	A REVERSE SHOCK IN GRB 160509A. *Astrophysical Journal*, **2016**, 833, 88	4.7	45
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190	HERSCHELOBSERVATIONS OF INTERSTELLAR CHLORONIUM. *Astrophysical Journal*, **2012**, 748, 37	4.7	44
189	Water content and wind acceleration in the envelope around the oxygen-rich AGB star IK Tauri as seen byHerschel/HIFI. *Astronomy and Astrophysics*, **2010**, 521, L4	5.1	44
188	Massive Quiescent Cores in Orion. I. Temperature Structure. *Astrophysical Journal*, **2003**, 587, 262-277	4.7	44
187	ALMA and VLA measurements of frequency-dependent time lags in Sagittarius A*: evidence for a relativistic outflow. *Astronomy and Astrophysics*, **2015**, 576, A41	5.1	43
186	GALACTIC STRUCTURE BASED ON THE ATLASGAL 870 □m SURVEY. *Astrophysical Journal*, **2012**, 747, 43	4.7	43
185	321 GHz submillimeter water masers around evolved stars. *Astrophysical Journal*, **1991**, 377, 647	4.7	43
184	WEAK AND COMPACT RADIO EMISSION IN EARLY HIGH-MASS STAR-FORMING REGIONS. I. VLA OBSERVATIONS. *Astrophysical Journal, Supplement Series*, **2016**, 227, 25	8	43
183	SUBMILLIMETER ARRAY OBSERVATIONS OF MAGNETIC FIELDS IN G240.31+0.07: AN HOURGLASS IN A MASSIVE CLUSTER-FORMING CORE. *Astrophysical Journal Letters*, **2014**, 794, L18	7.9	42
182	Water Maser Emission from the Active Nucleus in M51. *Astrophysical Journal*, **2001**, 560, L37-L40	4.7	42
181	Stellar clusters in the inner Galaxy and their correlation with cold dust emission. *Astronomy and Astrophysics*, **2013**, 560, A76	5.1	39
180	First Detection of HCO + Emission at High Redshift. *Astrophysical Journal*, **2006**, 645, L13-L16	4.7	39
179	Formaldehyde Absorption at [ITAL]z[/ITAL] = 0.685 toward the □Einstein Ring□B0218+357. *Astrophysical Journal*, **1996**, 465, L99-L102	4.7	39
178	Detection of the Winds from the Exciting Sources of Shell H [CSC]ii[/CSC] Regions in NGC 6334. *Astronomical Journal*, **2002**, 123, 2574-2582	4.9	38

177	SHARC-II 350 μm OBSERVATIONS OF THERMAL EMISSION FROM WARM DUST IN z? 5 QUASARS. *Astronomical Journal*, **2008**, 135, 1201-1206	4.9	37
176	Gas Dynamics of a Luminous z= 6.13 Quasar ULAS J1319+0950 Revealed by ALMA High-resolution Observations. *Astrophysical Journal*, **2017**, 845, 138	4.7	36
175	NEAR-INFRARED SPECTRA OF GALACTIC STELLAR CLUSTERS DETECTED ONSPITZER/GLIMPSE IMAGES. *Astrophysical Journal*, **2009**, 697, 701-712	4.7	36
174	Dynamical Masses for Pre–Main-Sequence Stars: A Preliminary Physical Orbit for V773 Tau A. *Astrophysical Journal*, **2007**, 670, 1214-1224	4.7	36
173	ON THE RELATIONSHIP OF UC H ii REGIONS AND CLASS II METHANOL MASERS. I. SOURCE CATALOGS. *Astrophysical Journal*, **2016**, 833, 18	4.7	35
172	Nuclear ashes and outflow in the eruptive star Nova Vul 1670. *Nature*, **2015**, 520, 322-4	50.4	34
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169	Dust Continuum Imaging of the HH 24 Region in L1630. *Astrophysical Journal*, **1999**, 527, 856-865	4.7	34
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165	FROM POLOIDAL TO TOROIDAL: DETECTION OF A WELL-ORDERED MAGNETIC FIELD IN THE HIGH-MASS PROTOCLUSTER G35.20–0.74 N. *Astrophysical Journal*, **2013**, 779, 182	4.7	31
164	Redshifted Molecular Absorption Systems toward PKS 1830–211 and B0218+357: Submillimeter CO, C [CSC]i[/CSC], and H[TINF]2[/TINF]O Data. *Astrophysical Journal*, **1997**, 488, L31-L34	4.7	31
163	(Sub)stellar companions shape the winds of evolved stars. *Science*, **2020**, 369, 1497-1500	33.3	31
162	RADIO MEASUREMENTS OF THE STELLAR PROPER MOTIONS IN THE CORE OF THE ORION NEBULA CLUSTER. *Astrophysical Journal*, **2017**, 834, 139	4.7	29
161	THE PROPER MOTIONS OF THE DOUBLE RADIO SOURCE n IN THE ORION BN/KL REGION. *Astrophysical Journal*, **2017**, 834, 140	4.7	29
160	The unusual afterglow of the gamma-ray burst 100621A. *Astronomy and Astrophysics*, **2013**, 560, A70	5.1	29

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158	Polarimetric Properties of Event Horizon Telescope Targets from ALMA. *Astrophysical Journal Letters*, **2021**, 910, L14	7.9	28
157	ALMA OBSERVATIONS OF THE OUTFLOW FROM SOURCE I IN THE ORION-KL REGION. *Astrophysical Journal Letters*, **2012**, 754, L17	7.9	27
156	THE WIDESPREAD OCCURRENCE OF WATER VAPOR IN THE CIRCUMSTELLAR ENVELOPES OF CARBON-RICH ASYMPTOTIC GIANT BRANCH STARS: FIRST RESULTS FROM A SURVEY WITH HERSCHEL /HIFI. *Astrophysical Journal Letters*, **2011**, 727, L29	7.9	27
155	HIFI Spectroscopy of H2O Submillimeter Lines in Nuclei of Actively Star-forming Galaxies. *Astrophysical Journal*, **2017**, 846, 5	4.7	26
154	MOLECULAR CLOUD-SCALE STAR FORMATION IN NGC 300. *Astrophysical Journal*, **2014**, 789, 81	4.7	26
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151	A Class of Interstellar OH Masers Associated with Protostellar Outflows. *Astrophysical Journal*, **2003**, 593, 925-930	4.7	26
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149	A LABOCA SURVEY OF THE EXTENDED CHANDRA DEEP FIELD SOUTH□UBMILLIMETER PROPERTIES OF NEAR-INFRARED SELECTED GALAXIES. *Astrophysical Journal*, **2010**, 719, 483-496	4.7	25
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147	THE POPULATION OF COMPACT RADIO SOURCES IN THE ORION NEBULA CLUSTER. *Astrophysical Journal*, **2016**, 822, 93	4.7	25
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143	First Sagittarius A* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way. *Astrophysical Journal Letters*, **2022**, 930, L12	7.9	23
142	THE EVOLUTIONARY TRACKS OF YOUNG MASSIVE STAR CLUSTERS. *Astrophysical Journal*, **2014**, 794, 147	4.7	22

141	APEX CO (9-8) MAPPING OF AN EXTREMELY HIGH VELOCITY AND JET-LIKE OUTFLOW IN A HIGH-MASS STAR-FORMING REGION. *Astrophysical Journal Letters*, **2011**, 743, L25	7.9	22
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134	Monitoring the Morphology of M87* in 2009–2017 with the Event Horizon Telescope. *Astrophysical Journal*, **2020**, 901, 67	4.7	20
133	First Sagittarius A* Event Horizon Telescope Results. III. Imaging of the Galactic Center Supermassive Black Hole. *Astrophysical Journal Letters*, **2022**, 930, L14	7.9	20
132	HERSCHELOBSERVATIONS OF INTERSTELLAR CHLORONIUM. II. DETECTIONS TOWARD G29.96-0.02, W49N, W51, AND W3(OH), AND DETERMINATIONS OF THE ORTHO-TO-PARA AND35Cl/37Cl ISOTOPIC RATIOS. *Astrophysical Journal*, **2015**, 807, 54	4.7	19
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129	MOLECULES IN G1.6−0.025: HOT CHEMISTRY IN THE ABSENCE OF STAR FORMATION AT THE PERIPHERY OF THE GALACTIC CENTER REGION. *Astrophysical Journal*, **2009**, 692, 47-60	4.7	19
128	SUBMILLIMETER ARRAY AND VERY LARGE ARRAY OBSERVATIONS IN THE HYPERCOMPACT H II REGION G35.58-0.03. *Astrophysical Journal*, **2014**, 784, 107	4.7	18
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121	Detection of three new methanol maser transitions toward star-forming regions. *Astrophysical Journal*, **1989**, 346, 330	4.7	17
120	Magnetized filamentary gas flows feeding the young embedded cluster in Serpens South. *Nature Astronomy*, **2020**, 4, 1195-1201	12.1	17
119	Star Formation and ISM Properties in the Host Galaxies of Three Far-infrared Luminous Quasars at z ~ 6. *Astrophysical Journal*, **2019**, 876, 99	4.7	16
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108	First Sagittarius A* Event Horizon Telescope Results. IV. Variability, Morphology, and Black Hole Mass. *Astrophysical Journal Letters*, **2022**, 930, L15	7.9	16
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