

MOLECULES INDEX

Molecules are grouped according to the number of constituent atoms. Within each group they are listed alphabetically (CH appears ahead of CN). Subscripts are used to differentiate between alphabetically identical molecules. The smallest subscript is ranked first, and precedence is given in order from the left (CH₂ appears ahead of C₂H). Molecular ions are listed immediately following the equivalent molecule (CH₂ appears ahead of CH₂⁺) and are given precedence over isotopes (CH₂⁺ appears ahead of ¹³CH₂). Isotopes are listed following the parent molecule and are given precedence in the order in which the molecule is written (¹³CH₂ appears ahead of CDH). Thus the molecules CH₂, CH₂⁺, CDH, CD₂, C₂H, C₂H⁺, C¹³CH, C₂D would appear in that order.

Molecules containing 6 atoms or less are written in their commonly-used form e.g. CH₃OH is not rearranged to be CH₄O as is the practice in some indices. However the editor, to preserve his sanity and disguise his ignorance, has wantonly destroyed the chemical identity of molecules having more than 6 atoms, except in the case of the easily recognisable cyanopolyne series which was frequently discussed at the Symposium.

Page numbers refer to the title page of the article in which the listed molecule is mentioned.

1 atom

Ar	367, 373, 389
B	373
C	165, 177, 183, 209, 239, 257, 281, 283, 325, 337, 341, 355, 373, 309, 397, 411, 423, 427, 445, 471, 479, 627
C ⁺	67, 77, 81, 177, 263, 273, 281, 283, 291, 297, 307.
¹³ C	311, 317, 323, 331, 337, 341, 423, 427, 445
¹³ C ⁺	209, 397, 423, 427,
Ca	341, 423, 427
Cd	261, 341
Cl	367
Cl ⁺	247, 257, 271, 273
Co	271, 273
Cu	367
e	367
¹⁷ F	77, 339
¹⁸ F	427
Fe	427
	367

- H 1, 77, 137, 159, 177, 189, 209, 213, 231, 261, 263, 271, 273, 281, 283, 289, 291, 297, 325, 337, 341, 355, 367, 397, 427, 439, 445, 479, 551, 559, 583, 611, 627, 637
H⁺ 77, 273, 283, 291, 297, 337, 427
H⁻ 273
D 273, 341, 427
D⁺ 273, 291, 427
He 1, 221, 261, 289, 291, 317, 323, 341, 367, 373, 397, 427, 583, 589, 627
He* 299
He⁺ 77, 81, 331, 337, 341
³He 427
³He⁺ 427
Li 427
Li⁺ 291
Mg 257, 337, 471
Mg⁺ 337
Mn 367
N 77, 261, 273, 281, 311, 325, 331, 337, 341, 355, 373, 389, 397, 423, 427, 479
N⁺ 311, 331
¹³N 427
¹⁵N 397, 427, 479
Na 341
Ne 373, 389
Ni 367
O 77, 165, 239, 273, 281, 291, 297, 325, 331, 337, 341, 355, 373, 389, 397, 423, 427, 439, 445, 455, 479
O⁺ 273, 311
O⁻ 389
¹⁴O 427
¹⁵O 427
¹⁷O 397, 427
¹⁸O 397, 427
S 183, 257, 297, 337, 373, 397, 445
S⁺ 291, 297, 337, 427
S⁻ 297
³³S 397, 427
³⁴S 397, 427
³⁴S⁺ 427
Si 261, 337, 341, 397, 427, 445
Si⁺ 337
²⁹Si 427
³⁰Si 427

2 atoms

AlH	247
C ₂	177, 231, 247, 257, 261, 263, 273, 325, 337, 367, 613
C ₂ ⁺	291, 307
CCl ⁺	273
CF	239
CH	71, 177, 231, 239, 247, 257, 261, 263, 273, 325, 337, 367, 613
CH ⁺	247, 257, 261, 263, 273, 283, 291, 311, 317, 331, 445
¹³ CH	247
CD	583
CN	59, 67, 77, 231, 247, 273, 307, 325, 331, 337, 395, 423, 479, 497, 515
CN ⁺	247, 307, 331
CO	1, 21, 31, 33, 41, 47, 81, 83, 85, 89, 103, 111, 113, 115, 123, 125, 127, 129, 135, 137, 151, 157, 159, 163, 165, 173, 175, 177, 183, 185, 187, 189, 197, 205, 209, 213, 239, 247, 257, 261, 273, 281, 289, 297, 307, 311, 317, 323, 331, 337, 339, 341, 355, 365, 373, 381, 387, 395, 409, 411, 417, 421, 423, 427, 439, 445, 455, 465, 471, 473, 479, 487, 495, 497, 503, 509, 515, 537, 545, 551, 591, 611, 613, 619, 625, 637
CO ⁺	247, 291, 311
¹³ CO	1, 31, 33, 113, 115, 117, 127, 135, 137, 157, 159, 185, 187, 196, 247, 341, 397, 411, 417, 421, 423, 427, 487, 509, 515
C ¹⁷ O	397, 417, 427
C ¹⁸ O	71, 397, 411, 417, 421, 427
¹³ C ¹⁸ O	397, 417
CS	1, 47, 117, 157, 247, 297, 307, 337, 397, 421, 427, 479, 497, 613
¹³ CS	397
C ³³ S	397
C ³⁴ S	397
CaH	247
CaO	389
ClO	239
FeH	367
FeH ⁺	273
H ₂	1, 21, 33, 41, 47, 59, 67, 71, 77, 83, 85, 89, 91, 101, 117, 127, 137, 151, 159, 163, 165, 175, 177, 185, 187, 189, 209, 221, 231, 247, 263, 271, 273, 283, 291, 297, 307, 311, 317, 323, 325, 331, 339, 341, 365, 367, 423, 427, 439, 445, 455, 465, 469, 471, 479, 495, 503, 549, 551, 565, 583, 589, 591, 611, 613
H ₂ ⁺	231, 291
HD	231, 247, 273, 341, 427, 439, 613, 637
D ₂	231
H ⁷⁹ Br ⁺	239
D ⁷⁹ Br ⁺	239
HCl	247, 257, 269, 271, 273
HCl ⁺	271, 273
HeAr ⁺	231

HeH ⁺	231
HeNe ⁺	231
³ HeNe ⁺	231
MgH	247
MgH ⁺	247, 273
MgO	389
N ₂	59, 247, 323, 325, 331, 337, 341, 365, 427, 613
N ₂ ⁺	231, 291, 311
¹⁴ N ¹⁵ N	427
NH	239, 247, 281, 331, 337
NH ⁺	247, 311, 331, 583
NO	239, 247, 289, 311, 337, 373
NO ⁺	231, 311, 337
NS	261, 337
NaH	247
NaH ⁺	273
O ₂	77, 177, 239, 247, 291, 297, 311, 323, 325, 331, 337
O ₂ ⁺	231, 291, 311
OH	1, 103, 111, 125, 129, 177, 189, 231, 239, 247, 257, 273, 281, 289, 337, 341, 397, 427, 445, 455, 473, 479, 487, 503, 515, 525, 537, 539, 549, 551, 559, 565, 579, 581, 583, 589, 613, 627
OH ⁺	341
OH ⁻	281
¹⁸ OH	397
OD	583
PH	239
S ₂	337
SH	247, 273, 297, 337, 445
SH ⁺	337
SO	1, 31, 69, 71, 117, 297, 337
SO ⁺	291, 337
³⁴ SO	71
Si ₂	337
Si ₂ ⁺	337
SiC	337, 479, 497
SiC ⁺	337
SiH	247, 337
SiH ⁺	273, 337,
SiO	31, 33, 39, 247, 337, 341, 397, 445, 479, 487, 497, 503, 515, 525, 535, 537, 539, 541, 543, 545, 551, 565, 613, 619, 625
SiO ⁺	337
²⁹ SiO	397
SiS	297, 479, 497
TiO	479, 515

3 atoms

C ₃	247, 307, 337
CH ₂	177, 231, 239, 247, 257, 289, 331, 337, 381, 423, 613
CH ₂ ⁺	283, 291, 311, 317, 323, 331, 341
(CH ₂ ⁺)*	323
CD ₂	231
C ₂ H	47, 81, 239, 299, 307, 311, 331, 337, 341, 427, 479, 497
C ₂ H ⁺	81, 263, 291, 307, 423
CN ₂	337
C ₂ N	337
C ₂ N ⁺	307, 311, 331, 337, 341
CNO	411,
CO ₂	247, 311, 323, 337, 355, 365, 633
C ₂ O	337
CS ₂	337
FeF ₂	367
FeH ₂	367
H ₃	231,
H ₃ ⁺	77, 231, 291, 297, 311, 331, 339, 337, 341, 427, 439
H ₂ D ⁺	427, 439
D ₃	231
D ₃ ⁺	231
HCN	1, 25, 31, 39, 47, 59, 67, 77, 83, 103, 109, 157, 209, 299, 305, 307, 325, 331, 337, 341, 365, 397, 423, 427, 479, 497, 509, 545
HCN ⁺	59, 291, 299, 307, 311, 331
DCN	307, 427
H ¹³ CN	39, 59, 397, 427
HC ¹⁵ N	397, 427
HCO	177, 231, 239, 281, 331, 337, 355, 439
HCO ⁺	1, 25, 31, 39, 81, 109, 177, 231, 297, 311, 323, 331, 337, 339, 341, 427, 439, 479
DCO ⁺	1, 341, 427, 439
H ¹³ CO ⁺	341, 397, 427
HC ¹⁸ O ⁺	397, 427
HCS ⁺	297, 337
HNC	1, 25, 77, 337, 341, 427, 439, 479, 497
HNO	231, 289, 311, 337
HNO ⁺	311
HO ₂	239, 337
H ₂ O	1, 21, 31, 41, 129, 175, 177, 239, 247, 257, 269, 289, 307, 311, 317, 323, 331, 337, 341, 355, 365, 373, 387, 445, 479, 487, 515, 525, 545, 551, 565, 579, 591, 593, 599, 603, 613, 627, 637
H ₂ O*	289
H ₂ O ⁺	231, 291
H ₂ ¹⁸ O	21
H ₂ S	31, 297, 307, 337, 365
H ₂ S ⁺	297
NCO	337

NCO^+	77
NCS	337
NH_2	59, 231, 239, 289, 307, 311, 331, 337, 355, 583
NH_2^+	311, 331
ND_2	307
N_2H^+	25, 31, 71, 231, 341, 427, 479
N^{15}NH^+	427
N_2D^+	71, 341
NO_2	239
N_2O	337
OCS	31, 297, 337, 341, 365, 397, 445
O^{13}CS	397
PH_2	239
SO_2	1, 21, 25, 31, 297, 365
SiH_2	337

4 atoms

C ₄	337
CH ₃	59, 231, 289, 331, 337, 341, 381, 439
CH ₃ ⁺	67, 291, 305, 307, 311, 317, 323, 331, 337, 341, 427
CH ₂ D	439
CH ₂ D ⁺	439
CD ₃	307
CD ₃ ⁺	307
C ₂ H ₂	59, 291, 299, 307, 311, 317, 325, 331, 337, 365, 367, 373, 427, 479, 497, 509
C ₂ H ₂ ⁺	77, 291, 299, 307, 311, 323, 337
C ₃ H	337
C ₃ H ⁺	337
CHCO ⁺	337
CH ₂ F	239
C ₂ N ₂	307, 325
C ₃ N	47, 337, 479, 497
C ₂ O ₂ ⁺	337
COOH	337
COOH ⁺	337
HCCN	59
H ₂ CN ⁺	77, 299, 307, 311, 317, 331, 337, 341
HCNH ⁺	307, 337, 341
DCND ⁺	307
HCO ₂	355
H ₂ CO	1, 25, 71, 81, 85, 89, 95, 99, 101, 103, 113, 117, 123, 177, 221, 281, 323, 331, 337, 341, 355, 365, 397, 405, 409, 427, 439, 473, 627
H ₂ CO ⁺	337
HDCO	341, 427, 439
H ₂ ¹³ CO	397, 405, 409, 439
H ₂ C ¹⁸ O	397, 405, 409
H ₂ CS	25, 297, 365
H ₂ CS ⁺	337
HNCO	317, 337
HNCS	337
H ₂ NO ⁺	311
H ₂ O ₂	337
H ₃ O ⁺	177, 337, 341,
NH ₃	1, 39, 59, 67, 69, 71, 77, 83, 85, 89, 91, 93, 175, 221, 231, 289, 307, 311, 317, 323, 325, 331, 337, 341, 355, 365, 373, 387, 427, 479, 495, 497, 503, 565, 603, 627, 633
NH ₃ ⁺	47, 231, 291, 311, 317, 331, 341
¹⁵ NH ₃	427
NH ₂ D	427
N ₂ H ₂	355
NOCN	45

5 atoms

CH ₄	41, 77, 283, 289, 291, 307, 311, 317, 323, 325, 337, 341, 355, 365, 367, 373, 387, 479, 497, 509, 591
CD ₄	307
C ₂ H ₃	337
C ₂ H ₃ ⁺	67, 299, 307, 311, 323
C ₂ D ₂ H ⁺	307
C ₃ H ₂	337
C ₄ H	47, 479, 497
CH ₂ CN	59, 337
CH ₂ CO	317, 337
CH ₃ I	59
CH ₂ N ₂	337
CH ₂ NH	311, 337
CH ₂ OH	337
C ₄ N	45
C ₄ O	45
HC ₃ N	1, 25, 47, 59, 71, 77, 81, 91, 299, 307, 317, 325, 331, 337, 397, 427, 479, 497
HC ₃ N ⁺	307
H ¹³ CC ₂ N	397
HC ¹³ CCN	59
HC ₂ ¹³ CN	59
H ₃ CO	239, 337
H ₃ CO ⁺	323, 439
H ₂ DCO ⁺	439
HCOOH	337, 355, 365, 627
H ₃ CS	337
NH ₄ ⁺	291, 307, 311, 323, 331, 341
NH ₂ CN	365

6 atoms

CH ₅ ⁺	291, 311, 317, 323, 337
C ₂ H ₄	291, 311, 337, 367, 497
C ₂ H ₄ ⁺	323
C ₄ H ₂	325, 337
CH ₂ C ₂ H	337
CH ₃ CN	307, 325, 365, 479
CH ₃ CO	337
CH ₃ CO ⁺	317, 337
CH ₂ NH ₂	311
CH ₂ NH ₂ ⁺	311, 337
CH ₃ OH	1, 117, 317, 323, 337, 365, 373, 524, 525, 565
C ₅ N	45
H ₂ C ₃ N	59
H ₂ C ₃ N ⁺	299, 307

H_4CN^+	311
$(\text{HCO})_2$	45, 337
HCONH_2	337, 355, 365, 397
$\text{H}^{13}\text{CONH}_2$	397
NH_5^+	291, 317, 341
NH_3CO^+	317

7 atoms

C_2H_5	337
C_3H_4	59, 325, 331, 337, 365
C_4H_3	337
C_4H_3^+	67
CH_5N	325, 337, 365
$\text{C}_2\text{H}_4\text{N}^+$	305, 307
$\text{C}_3\text{H}_3\text{N}$	307, 331, 337
$\text{C}_3\text{H}_3\text{N}^+$	77, 299, 307, 331
CH_5O^+	317, 323, 337
$\text{C}_2\text{H}_2\text{O}_3$	45
$\text{C}_2\text{H}_4\text{O}$	331, 337, 365
C_5O_2	45
HC_5N	41, 47, 59, 67, 69, 71, 77, 81, 325, 331, 479, 497
$\text{HC}_4^{13}\text{CN}$	59

8 atoms

C_2H_6	337, 367, 497
C_3H_5	337
C_3H_5^+	77
C_6H_2	325
CH_6N^+	311, 317
$\text{C}_2\text{H}_5\text{N}^+$	311
$\text{C}_3\text{H}_4\text{N}^+$	299, 317, 331
$\text{C}_4\text{H}_3\text{N}$	45, 325
$\text{C}_5\text{H}_2\text{N}^+$	331
$\text{C}_2\text{H}_4\text{O}_2$	45, 331, 365
$\text{C}_3\text{H}_4\text{O}$	337

9 atoms

C_3H_6	337
C_3H_5N	45, 331, 337, 365
C_2H_6O	307, 323, 331, 365
$C_3H_4O_2$	45
HC_7N	47, 59, 69, 71, 325, 331, 479, 495, 497

10 atoms

C_4H_6	337
C_5H_5	325
C_8H_2	325
C_3H_6N	331
C_4H_5N	45, 325
C_5H_4N	331
$C_2H_7O^+$	307, 323
C_3H_6O	45

More than 10 atoms

C_5H_6	45
C_6H_6	291, 325, 497
C_7H_8	325
C_8H_6	325
C_9H_8	325
$C_{10}H_2$	325
$C_{10}H_8$	325
C_4H_7N	45
C_7H_5N	325
C_8H_6N	325
$C_8H_6N_2$	389
C_4H_6O	45
HC_9N	47, 325, 331