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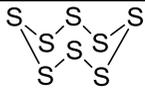
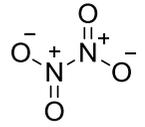
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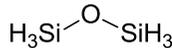
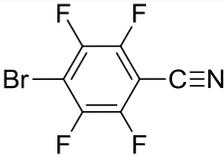
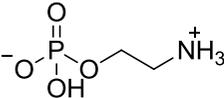
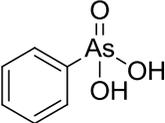
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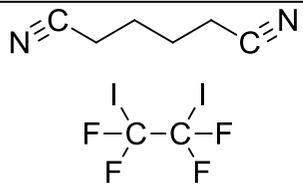
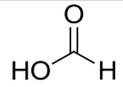
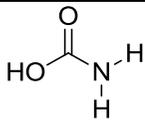
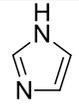
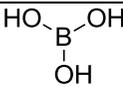
***CrystalExplorer* model energies and energy frameworks: extension to metal coordination compounds, organic salts, solvates and open-shell systems**

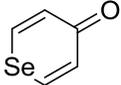
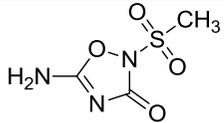
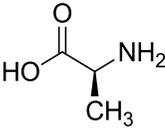
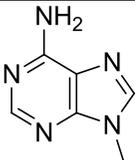
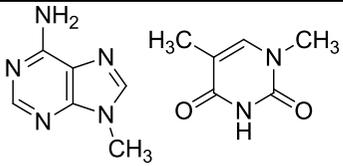
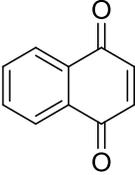
Campbell F. Mackenzie, Peter R. Spackman, Dylan Jayatilaka and Mark A. Spackman

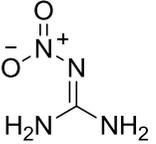
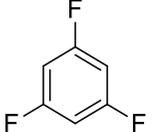
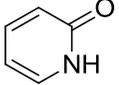
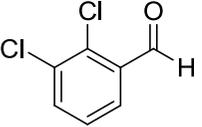
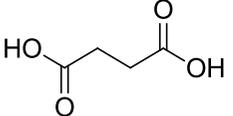
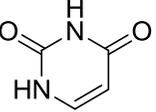
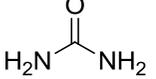
Table S1**Table S2** Crystal structure details for 37 “neutral pairs”.

| | Name | Diagram | Reference |
|----------------------|----------------------|--|---|
| 15318- ICSD-I2 | iodine | I—I | F. van Bolhuis, P.B. Koster, T. Migchelsen, <i>Acta Cryst.</i> (1967) 23 , 90. |
| 200455- ICSD-S8 | sulfur |  | P. Coppens, Y.W. Yang, R.H. Blessing, W.F. Cooper, F.K. Larsen, <i>J. Am. Chem. Society</i> (1977) 99 , 760. |
| 201142- ICSD-N2O4 | dinitrogen tetroxide |  | A. Kvick, R.K. McMullan, M.D. Newton, <i>J. Chem. Phys.</i> (1982) 76 , 3754. |
| 201693- ICSD-Br2 | bromine | Br—Br | B.M. Powell, K.M. Heal, B.H. Torrie, <i>Mol. Phys.</i> (1984) 53 , 929. |
| 201698- ICSD-Cl2 | chlorine | Cl—Cl | B.M. Powell, K.M. Heal, B.H. Torrie, <i>Mol. Phys.</i> (1984) 53 , 929. |
| 260950- ICSD-XeF2 | xenon difluoride | F—Xe—F | H.S.A. Elliot, J.F. Lehmann, H.P.A. Mercier, H.D.B. Jenkins, G.J. Schrobilgen, <i>Inorg. Chem.</i> (2010) 49 , 8504. |

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| 30501- ICSD- disiloxane | disiloxane |  | M.J. Barrow, E.A.V. Ebsworth, M.M. Harding, <i>Acta Cryst. B</i> (1979) 35 , 2093. |
| ACETYL02 | acetylene | $\text{H}-\text{C}\equiv\text{C}-\text{H}$ | R.K. McMullan, A. Kvik, P. Popelier, <i>Acta Crystallogr., Sect. B: Struct. Sci.</i> (1992), 48 , 726. |
| ACOKEI | 4-bromo-2,3,5,6- fluorobenzonitrile |  | A.D. Bond, J. Griffiths, J.M. Rawson, J. Hulliger, <i>Chem. Commun.</i> (2001), 2488. |
| AEPHOS02 | phosphorylethanolamine |  | H.-P. Weber, R.K. McMullan, S. Swaminathan, B.M. Craven, <i>Acta Crystallogr., Sect. B: Struct. Sci.</i> (1984), 40 , 506. |
| ARSACP02 | phenylarsonic acid |  | N.C. Lloyd, H.W. Morgan, B.K. Nicholson, R.S. Ronimus, <i>J. Organomet. Chem.</i> (2008), 693 , 2443. |
| BENZEN01 | benzene |  | G.E. Bacon, N.A. Curry, S.A. Wilson, <i>Proc. R. Soc. London, Ser. A</i> (1964), 279 , 98. |
| DCLBEN03 -gamma | p-dichlorobenzene |  | G.L. Wheeler, S.D. Colson, <i>Acta Crystallogr., Sect. B: Struct. Crystallogr. Cryst. Chem.</i> (1975), 31 , 911. |
| DCLBEN06 -beta | p-dichlorobenzene |  | G.L. Wheeler, S.D. Colson, <i>J. Chem. Phys.</i> (1976), 65 , 1227. |

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|--------------------|---|--|--|
| DCLBEN07 -alpha | p-dichlorobenzene |  | G.L.Wheeler, S.D.Colson, <i>J.Chem.Phys.</i> (1976), 65 , 1227. |
| EBIHIH | 1,4-dicyanobutane 1,2-di-iodo- 1,1,2,2-tetrafluoroethane |  | P.Metrangolo, T.Pilati, G.Resnati, A.Stevenazzi, <i>Chem.Commun.</i> (2004), 1492. |
| ETHANE01 | ethane | $\text{H}_3\text{C}-\text{CH}_3$ | G.J.H.van Nes, A.Vos, <i>Acta Crystallogr., Sect.B: Struct. Crystallogr. Cryst. Chem.</i> (1978), 34 , 1947. |
| ETHLEN10 | ethylene | $\text{H}_2\text{C}=\text{CH}_2$ | G.J.H.van Nes, A.Vos, <i>Acta Crystallogr., Sect.B: Struct. Crystallogr. Cryst. Chem.</i> (1979), 35 , 2593. |
| FORMAC01 | formic acid |  | I.Nahringbauer, <i>Acta Crystallogr., Sect.B: Struct. Crystallogr. Cryst. Chem.</i> (1978), 34 , 315. |
| FORMAM0 2 | formamide |  | E.D.Stevens, <i>Acta Crystallogr., Sect.B: Struct. Crystallogr. Cryst. Chem.</i> (1978), 34 , 544. |
| IMAZOL13 | imidazole |  | B.M.Craven, R.K.McMullan, J.D.Bell, H.C.Freeman, <i>Acta Crystallogr., Sect.B: Struct. Crystallogr. Cryst. Chem.</i> (1977), 33 , 2585. |
| JAGREP | orthoboric acid |  | R.R.Shuvalov, P.C.Burns, <i>Acta Crystallogr., Sect.C: Cryst. Struct. Commun.</i> (2003), 59 , i47. |

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|--------------|---|--|---|
| JOYHUA | 4H-selenopyran-4-one |  | M.R.Detty, H.R.Luss, <i>Organometallics</i> (1992), 11 , 2157. |
| JUPPAL | 5-amino-2-mesy1-2,3-dihydro-1,2,4-oxadiazol-3-one |  | Do Young Ra, Nam Sook Cho, Sung Kwon Kang, Eun Suk Choi, Il Hwan Suh, <i>J.Chem.Soc.,Perkin Trans.2</i> (1999), 81. |
| LALNIN03 | L-alanine |  | R.Destro, R.E.Marsh, R.Bianchi, <i>J.Phys.Chem.</i> (1988), 92 , 966. |
| MEADEN05 | 9-methyladenine |  | K.N.Jarzembska, A.M.Goral, R.Gajda, P.M.Dominiak, <i>Cryst.Growth Des.</i> (2013), 13 , 239. |
| MTHMAD1 1 | 9-methyladenine-1-methylthymine complex |  | M.N.Frey, T.F.Koetzle, M.S.Lehmann, W.C.Hamilton, <i>J.Chem.Phys.</i> (1973), 59 , 915. |
| NAPHQU | 1,4-naphthoquinone |  | J.Gaultier, C.Hauw, <i>Acta Crystallogr.</i> (1965), 18 , 179. |

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|--------------|--------------------------|--|---|
| NTRGUA03 | 2-nitroguanidine |  | R.K.Murmann, R.Glaser, C.L.Barnes, <i>J.Chem.Cryst.</i> (2005), 35 , 317. |
| PVVAWA0 1 | 1,3,5-trifluorobenzene |  | V.R.Thalladi, H.-C.Weiss, D.Blaser, R.Boese, A.Nangia, G.R.Desiraju, <i>J.Am.Chem.Soc.</i> (1998), 120 , 8702. |
| PYRIDO04 | 2-pyridone |  | U.Ohms, H.Guth, E.Hellner, H.Dannohl, A.Schweig, <i>Z.Kristallogr.</i> (1984), 169 , 185. |
| QEWXIA01 | 2,3-dichlorobenzaldehyde |  | K.A.Solanko, A.D.Bondy, <i>Acta Crystallogr., Sect.B: Struct.Sci.</i> (2011), 67 , 437. |
| SUCACB09 | 1,4-butanedioic acid |  | V.R.Thalladi, M.Nusse, R.Boese, <i>J.Am.Chem.Soc.</i> (2000), 122 , 9227. |
| URACIL | uracil |  | R.F.Stewart, L.H.Jensen, <i>Acta Crystallogr.</i> (1967), 23 , 1102. |
| UREAXX12 | urea |  | S.Swaminathan, B.M.Craven, R.K.McMullan, <i>Acta Crystallogr., Sect.B: Struct.Sci.</i> (1984), 40 , 300. |

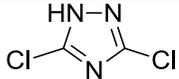
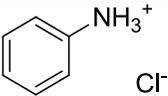
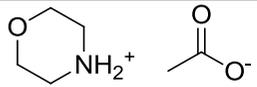
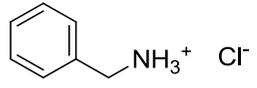
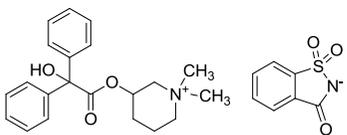
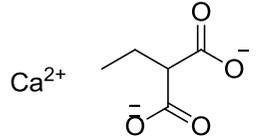
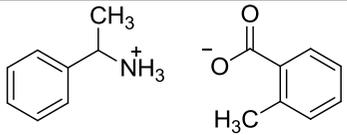
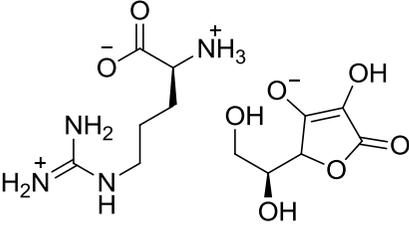
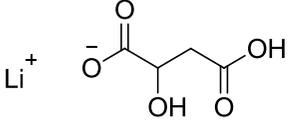
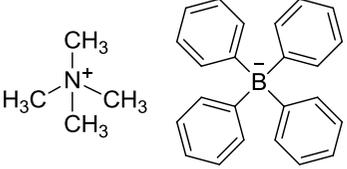
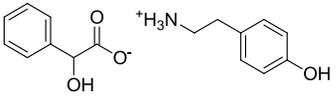
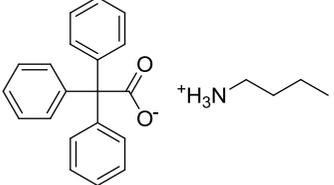
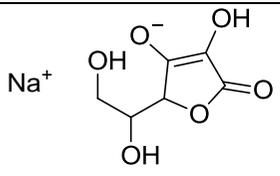
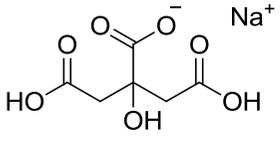
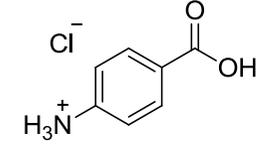
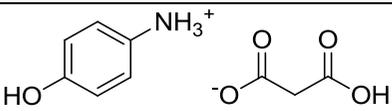
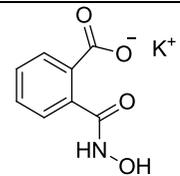
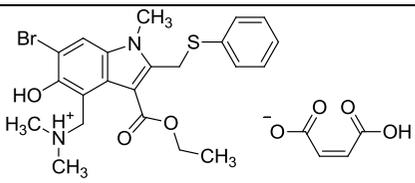
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| VAMZIT01 | pentacyclo[4.4.0.0 ^{2,5} .0 ^{3,8} .0 ^{4,7}]dec-9-ene (basketene) |  | S.P.Verevkin, M.Kummerlin, E.Hickl, H.-D.Beckhaus, C.Ruchardt, S.I.Kozhushkov, R.Haag, R.Boese, J.Benet-Bucholz, K.Nordhoff, A.de Meijere, <i>Eur.J.Org.Chem.</i> (2002), 2280. |
| VITRUL | 3,5-dichloro-1H-1,2,4-triazole |  | G.L.Starova, O.V.Frank-Kamenetskaya, V.V.Makarskii, <i>Kristallografiya(Russ.)(Crystallogr.Rep.)</i> (1990), 35 , 769 |

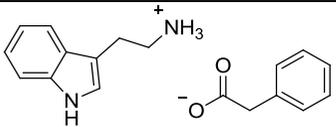
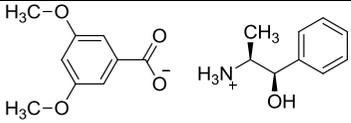
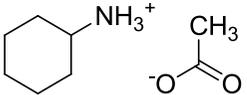
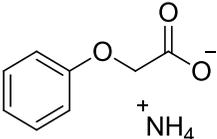
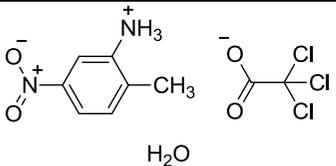
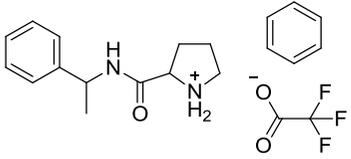
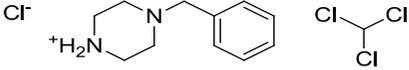
Table S3 Crystal structure details for 44 organic salts, including solvates.

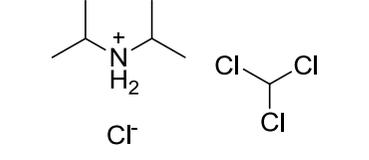
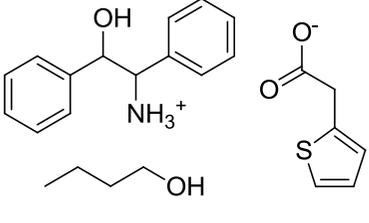
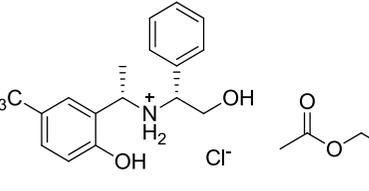
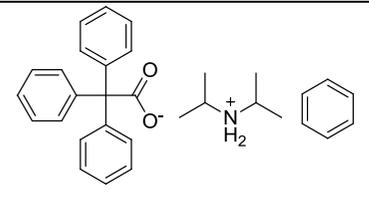
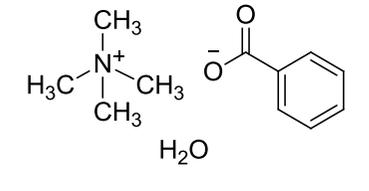
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| ANLINC01 | anilinium chloride |  | E.Lopez-Dupla, P.G.Jones, F.Vancea, <i>Z.Naturforsch.,B:Chem.Sci.</i> (2003). |
| BEPTUN | morpholin-4-ium acetate |  | S.P.Kelley, A.Narita, J.D.Holbrey, K.D.Green, W.M.Reichert, R.D.Rogers, <i>Cryst.Growth Des.</i> (2013), 13 , 965. |
| BOGCAC | benzylammonium chloride |  | M.Topper, M.L.McLaughlin, F.R.Fronczek, <i>CSD Communication(Private Communication)</i> |
| COXYIY | 3-(2-hydroxy(diphenyl)acetoxy)- 1,1-dimethylpiperidinium 3-oxo- 3H-1,2-benzothiazol-2-ide 1,1- dioxide (mepenzolate saccharinate) |  | P.M.Dean, J.Turanjanin, M.Yoshizawa-Fujita, D.R.MacFarlane, J.L.Scott, <i>Cryst.Growth Des.</i> (2009), 9 , 1137. |
| CUZHEK | calcium α -ethylmalonate |  | A.Zell, H.Einspahr, C.E.Bugg, <i>Biochemistry</i> (1985), 24 , 533. |
| DEZYEO | 1-phenylethanaminium 2- methylbenzoate |  | T.Sasaki, I.Hisaki, T.Miyano, N.Tohnai, K.Morimoto, H.Sato, S.Tsuzuki, M.Miyata, <i>Nat.Commun.</i> (2013), 4 , 1787. |

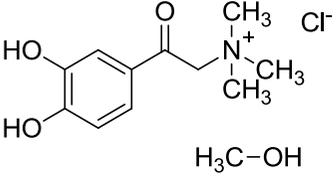
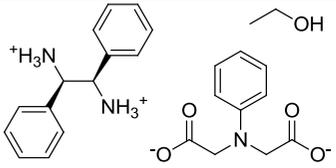
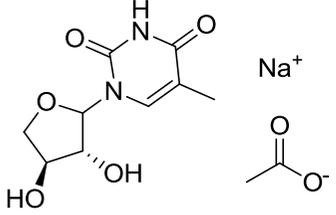
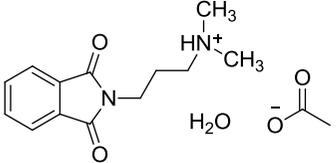
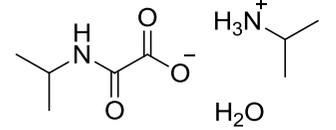
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| DUBWAZ | tetramethylammonium 2-(acetylamino)propanoate | | T.Gelbrich, E.Shepherd, M.B.Hursthouse, J.D.Kilburn, <i>University of Southampton, Crystal Structure Report Archive</i> (2000), 405. |
| DUFBIP | potassium o-sulfonatobenzoic acid | | T.B.Teplova, T.N.Turskaya, T.A.Shibanova, Yu.V.Nekrasov, G.S.Belikova, <i>Kristallografiya(Russ.)(Crystallogr.Rep.)</i> (1986), 31 , 187. |
| DUVCAZ | 4-ethylanilinium 2-carboxyacetate | | De-Hong Wu, Qi-Qi Wu, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2010), 66 , o2160. |
| FENYEC | pyrrolidinium p-hydroxybenzoate | | Y.Moritani, N.Sasahara, S.Kashino, M.Haisa, <i>Acta Crystallogr., Sect. C: Cryst. Struct. Commun.</i> (1987), 43 , 154. |
| HEZXAM | 2-hydroxyethanaminium (S)-hydroxy(phenyl)acetate (ethanolammonium mandelate) | | N.Wermester, E.Aubin, M.Pauchet, S.Coste, G.Coquerel, <i>Tetrahedron: Asymm.</i> (2007), 18 , 821. |
| HISREG | (R)-(+)-1 phenylethylammonium chloroacetate | | S.Houllemare-Druot, G.Coquerel, <i>J.Chem.Soc., Perkin Trans.2</i> (1998), 2211. |
| KUDFIA | 2-(dimethylamino)ethanaminium benzoate | | Dittrich, Dennis, Wolper, Christoph, Schulz, Stephan, <i>CSD Communication(Private Communication)</i> |

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|----------|--|---|---|
| LARASC20 | L-arginine L-ascorbate |  | V.Sudhakar, M.Vijayan, <i>Acta Crystallogr., Sect. B: Struct. Crystallogr. Cryst. Chem.</i> (1980), 36 , 120. |
| LIHMAM | lithium hydrogen (+)-1-malate |  | W.Van Havere, A.T.H.Lenstra, <i>Acta Crystallogr., Sect. B: Struct. Crystallogr. Cryst. Chem.</i> (1980), 36 , 1483. |
| MATPHB | tetramethylammonium tetraphenylborate |  | K.Hoffmann, E.Weiss, <i>J.Organomet.Chem.</i> (1974), 67 , 221. |
| MEDHOU01 | 2-(4-hydroxyphenyl)ethanaminium hydroxy(phenyl)acetate |  | N.E.B.Briggs, A.R.Kennedy, C.A.Morrison, <i>Acta Crystallogr., Sect. B: Struct. Sci.</i> (2012), 68 , 453. |
| MIBTOH | n-butylammonium triphenylacetate |  | T.Yuge, N.Tohnai, T.Fukuda, I.Hisaki, M.Miyata, <i>Chem.-Eur.J.</i> (2007), 13 , 4163. |

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| NAASCB | sodium ascorbate |  | J.Hvoslef, <i>Acta Crystallogr., Sect. B: Struct. Crystallogr. Cryst. Chem.</i> (1969), 25 , 2214. |
| NAHCIT | sodium dihydrogen citrate |  | J.P.Glusker, D.van der Helm, W.E.Love, M.L.Dornberg, J.A.Minkin, C.K.Johnson, A.L.Patterson, <i>Acta Crystallogr.</i> (1965), 19 , 561. |
| PAMBZA03 | 4-carboxyanilinium chloride |  | Wen Wu, Jiming Xie, Dongpo Xie, <i>Zh.Neorg.Khim.(Russ.)(Russ.J.Inorg.Chem.)</i> (2010), 55 , 384. |
| PAXNIN | 4-hydroxyanilinium carboxylate |  | Ying-Chun Wang, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2012), 68 , o1937. |
| RIRMUA | potassium phthalohydroxamate |  | Z.Ch.Kadyrova, N.K.Makhmudova, Kh.T.Sharipov, N.A.Parpiiev, <i>Uzb.Khim.Zh.(Russ.)(Uzbek Journal on Chemistry)</i> (1996), 11-5. |
| SIYSEA | umifenovir hydrogen maleate |  | L.Orola, I.Sarcevic, A.Kons, A.Actins, M.V.Veidis, <i>J.Mol.Struct.</i> (2014), 1056 , 63. |

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| TRPPAC | tryptammonium phenylacetate |  | M.Inoue, T.Sakaki, T.Fujiwara, K.Tomita, <i>Bull.Chem.Soc.Jpn.</i> (1978), 51 , 1123. |
| TUYKAB | (1R,2S)-norephedrine 3,5-dimethoxybenzoate |  | Chunji Li, J.Cho, K.Yamada, D.Hashizume, F.Araoka, H.Takezoe, T.Aida, Y.Ishida, <i>Nat.Commun.</i> (2015), 6 , 8418. |
| YABFOY | cyclohexylammonium acetate |  | J.A.Odendal, J.C.Bruce, K.R.Koch, D.A.Haynes, <i>CrystEngComm</i> (2010), 12 , 2398, |
| ZOWWEP | ammonium phenoxyacetate |  | G.Smith, <i>Acta Crystallogr.,Sect.E:Struct.Rep.Online</i> (2014), 70 , 528, |
| FOVCAV | 2-methyl-5-nitroanilinium trichloroacetate monohydrate |  | J.Janczak, G.J.Perpetuo, <i>Acta Crystallogr.,Sect.C:Cryst.Struct.Commun.</i> (2009), 65 , o339. |
| GELSUM | (2S,1'R)-2-(1'-phenylethylcarbamoyl)pyrrolidinium trifluoroacetate benzene solvate |  | S.S.Chimni, D.Mahajan, <i>Tetrahedron:Asymm.</i> (2006), 17 , 2108. |
| HODPUM | 4-benzylpiperazin-1-ium chloride chloroform solvate |  | M.G.Nema, R.A.Varga, C.Silvestru, H.J.Breunig, <i>Acta Crystallogr.,Sect.E:Struct.Rep.Online</i> (2008), 64 , o1585. |

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|--------|---|--|---|
| HORVAL | di-isopropylammonium chloride chloroform solvate |  | M.Nieger, E.Niecke, A.Loew, <i>CSD Communication(Private Communication)</i> (1999) |
| HURMOX | 2-hydroxy-1,2-diphenylethanaminium 2-thienylacetate butan-1-ol solvate |  | N.Shiota, T.Kinuta, T.Sato, R.Kuroda, Y.Matsubara, Y.Imai, <i>Tetrahedron</i> (2010), 66 , 5589. |
| IDOPAT | N-((S)-1-(5-methyl-2-hydroxyphenyl)ethyl)-N-((R)-2-hydroxy-1-phenylethyl)amine chloride ethyl acetate solvate |  | Guang-You Zhang, Xiang-Bo Wang, Jin-Yan Zhao, Wan-Hui Wang, Xiao-Feng Yang, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2006), 62 , o3035. |
| IRURAO | diisopropylammonium triphenylacetate benzene solvate |  | K.Sada, T.Watanabe, J.Miyamoto, T.Fukuda, N.Tohnai, M.Miyata, T.Kitayama, K.Maehara, K.Ute, <i>Chem.Lett.</i> (2004), 33 , 160. |
| ISIHIB | tetramethylammonium benzoate monohydrate |  | H.-Stoekli-Evans, G.Aromi, <i>CSD Communication(Private Communication)</i> (2004) |

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|--------|---|--|---|
| JAMMIT | (3,4-dihydroxyphenylacetyl)trimethylammonium chloride methanol solvate |  | R.B.Barlow, O.Johnson, J.A.K.Howard, D.C.Walton, G.Koellner, <i>Acta Crystallogr., Sect. B: Struct. Sci.</i> (1989), 45 , 396. |
| KOLDUL | (1R,2R)-1,2-diphenylethylenediammonium N-phenyliminodiacetate ethanol clathrate |  | Y.Imai, K.Murata, T.Sato, R.Kurodao, Y.Matsubara, <i>Org.Lett.</i> (2008), 10 , 3821. |
| MUTWUT | sodium 1-(α -L-threofuranosyl)thymine acetate |  | K.-U.Schoning, P.Scholz, Xiaolin Wu, S.Guntha, G.Delgado, R.Krishnamurthy, A.Eschenmoser, <i>Helv.Chim.Acta</i> (2002), 85 , 4111. |
| ROJJEG | N,N-dimethyl-3-phthalimidopropylammonium acetate hemihydrate |  | T.Borowiak, I.Wolska, P.Jensz, I.Kowalczyk, B.Brycki, A.Sztul, <i>J.Mol.Struct.</i> (2008), 891 , 205. |
| SIMRAI | isopropylammonium (isopropylamino)oxoacetate monohydrate |  | X.Sheng, C.E.Strasser, H.G.Raubenheimer, R.C.Luckay, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2007), 63 , o4361. |

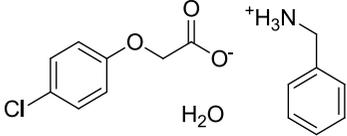
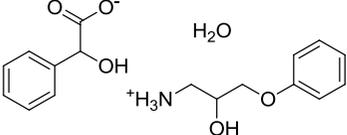
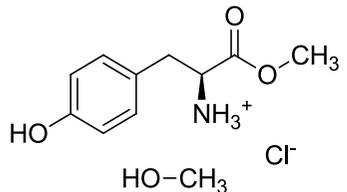
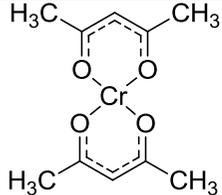
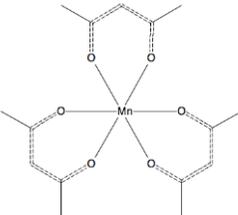
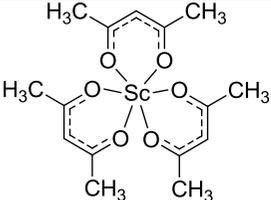
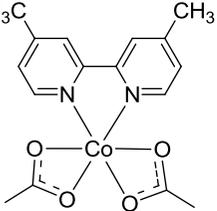
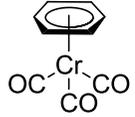
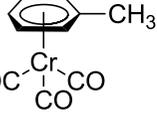
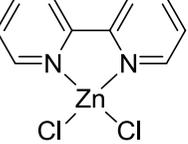
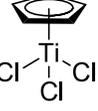
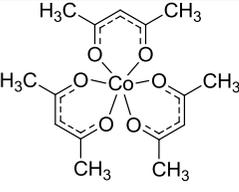
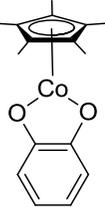
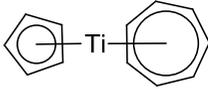
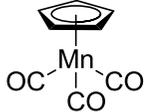
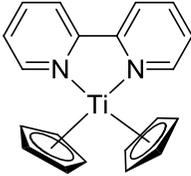
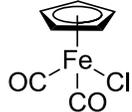
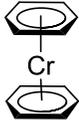
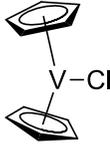
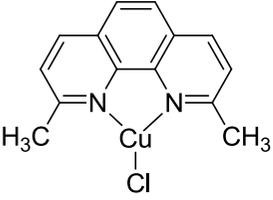
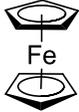
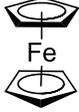
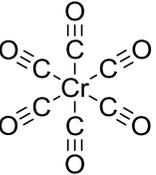
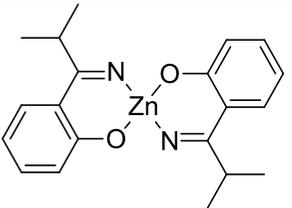
| | | | |
|--------|---|--|---|
| UGULUF | benzylammonium (4-chlorophenoxy)acetate monohydrate |  | Shouwen Jin, Zhanghui Lin, Daqi Wang, Guqing Chen, Zuoyi Ji, Tiansong Huang, Ying Zhou, <i>J.Chem.Cryst.</i> (2015), 45 , 159. |
| VEMJII | 2-hydroxy-3-phenoxypropan-1-aminium hydroxy(phenyl)acetate monohydrate |  | Pei Wang, En Zhang, Jian-Feng Niu, Qing-Hua Ren, Peng Zhao, Hong-Min Liu, <i>Tetrahedron:Asymm.</i> (2012), 23 , 1046, |
| YEFVAH | (2S)-methyl 2-ammonio-3-(4-hydroxyphenyl)propionate chloride methanol solvate (L-tyrosine methyl ester hydrochloride methanol solvate) |  | I.Bryndal, M.Jaremko, L.Jaremko, T.Lis, <i>Acta Crystallogr.,Sect.C:Cryst.Struct.Commun.</i> (2006), 62 , o111 |

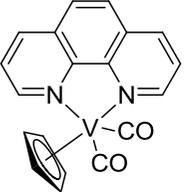
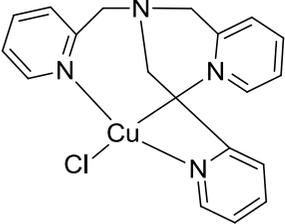
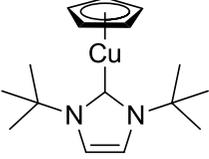
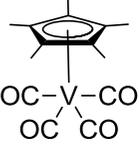
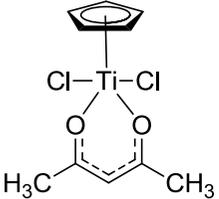
Table S4 Crystal structure details for 63 metal organics, including solvates.

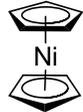
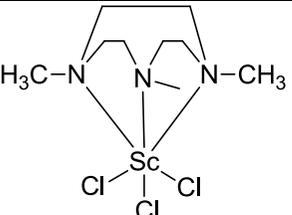
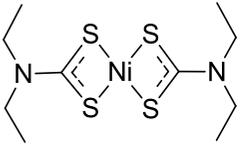
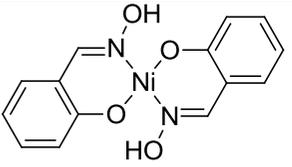
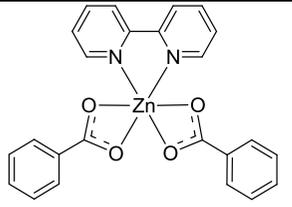
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|--------------|--|--|--|
| ACACCS | bis(2,4-pentanedionato) chromium(II) |  | F.A.Cotton, C.E.Rice, G.W.Rice, <i>Inorg.Chim.Acta</i> (1977), 24 , 231. |
| ACACMN0 2 | tris(acetylacetonato)- manganese(III) |  | J.P.Fackler Junior, A.Avdeef, <i>Inorg.Chem.</i> (1974), 13 , 1864 |
| ACACSC | tris(acetylacetonato)- scandium(III) |  | T.J. Anderson, M.A. Neuman, G.A. Melson, <i>Inorg. Chem.</i> (1973), 12 , 927. |
| BENDAB | (4,4'-dimethyl-2,2'-bipyridine)- diacetato-zinc(II) |  | M.A.Harvey, S.A.Suarez, A.Ibanez, F.Doctorovich, R.Baggio, <i>Acta Crystallogr., Sect.E:Struct.Rep.Online</i> (2012), 68 , m1377. |

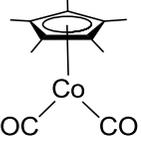
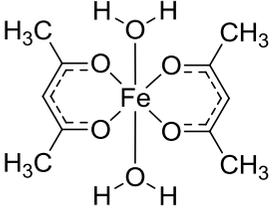
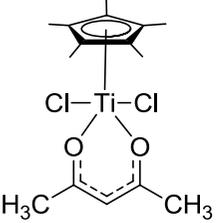
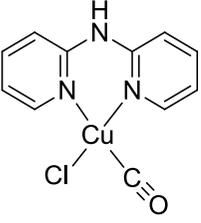
| | | | |
|----------|--|--|--|
| BZCRCO | (η^6 -benzene)-tricarbonyl-chromium(0) |  | M.F.Bailey, L.F.Dahl, <i>Inorg.Chem.</i> (1965), 4 , 1314. |
| CCRTOL | (η^6 -toluene)-tricarbonyl-chromium(0) |  | F.van Meurs, H.van Koningsveld, <i>J.Organomet.Chem.</i> (1977), 131 , 42. |
| CEFFOI | (2,2'-bipyridine)-dichloro-zinc(ii) |  | M.A.Khan, D.G.Tuck, <i>Acta Crystallogr.,Sect.C:Cryst.Struct.Commun.</i> (1984), 40 , 60. |
| CEHPIO01 | trichloro-(η^5 -cyclopentadienyl)-titanium(IV) |  | A.J.Rossini, R.W.Mills, G.A.Briscoe, E.L.Norton, S.J.Geier, I.Hung, Shaohui Zheng, J.Autschbach, R.W.Schurko, <i>J.Am.Chem.Soc.</i> (2009), 131 , 3317. |
| COACAC03 | tris(acetylacetonato) cobalt(III) |  | G.J.Kruger, E.C.Reynhardt, <i>Acta Crystallogr.,Sect.B:Struct.Crystallogr.Cryst.Chem.</i> (1974), 30 , 822. |
| COSRUX | (o-catecholato-O,O')-(η^5 -pentamethyl-cyclopentadienyl)-cobalt(III) |  | E.J.Miller, A.L.Rheingold, T.B.Brill, <i>J.Organomet.Chem.</i> (1984), 273 , 377. |

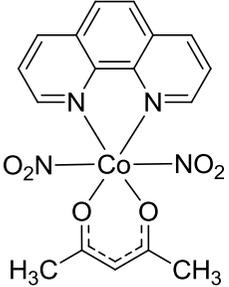
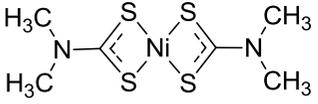
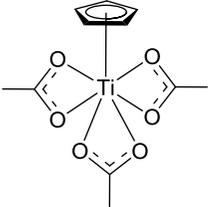
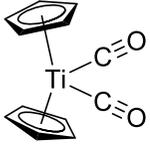
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| CPCHTI | (η^5 -cyclopentadienyl)-(η^7 -cycloheptatrienyl)-titanium |  | J.D.Zeinstra, J.L.de Boer, <i>J.Organomet.Chem.</i> (1973), 54 , 207. |
| CPMNC001 | tricarbonyl-(η^5 -cyclopentadienyl)-manganese(I) |  | P.J.Fitzpatrick, Y.Le Page, J.Sedman, I.S.Butler, <i>Inorg.Chem.</i> (1981), 20 , 2852. |
| CPTIBP01 | (2,2'-bipyridyl)-bis(η^5 -cyclopentadienyl)-titanium |  | R.Gyepes, P.T.Witte, M.Horacek, I.Cisarova, K.Mach, <i>J.Organomet.Chem.</i> (1998), 551 , 207. |
| DADHIZ | dicarbonyl-chloro-(η^5 -cyclopentadienyl)-iron(II) |  | K.-J.Jens, E.Weiss, <i>Acta Crystallogr.,Sect.C:Cryst.Struct.Commun.</i> (1985), 41 , 895. |
| DBENCR10 | bis(η^6 -benzene)-chromium(0) |  | F.Jellinek, <i>J.Organomet.Chem.</i> (1963), 1 , 43. |
| DCPVCL | chloro-dicyclopentadienyl-vanadium |  | B.F.Fieselmann, G.D.Stucky, <i>J.Organomet.Chem.</i> (1977), 137 , 43. |

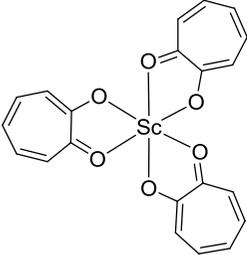
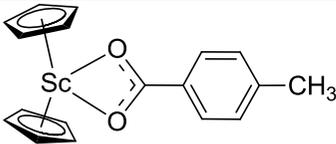
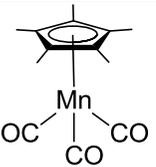
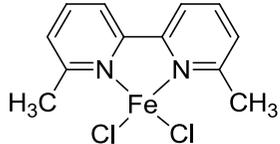
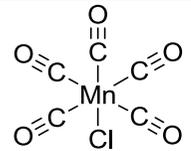
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| DIGWUL | chloro-(2,9-dimethyl-1,10-phenanthroline-N,N')-copper(I) |  | P.C.Healy, C.Pakawatchai, A.H.White, <i>J.Chem.Soc.,Dalton Trans.</i> (1985), 2531. |
| FEROCE06 | ferrocene |  | F.Takusagawa, T.F.Koetzle, <i>Acta Crystallogr.,Sect.B:Struct.Crystallogr.Cryst.Chem.</i> (1979), 35 , 1074. |
| FEROCE27 | ferrocene |  | C.P.Brock, Yigang Fu, <i>Acta Crystallogr.,Sect.B:Struct.Sci.</i> (1997), 53 , 928. |
| FOHCOU | hexacarbonyl-chromium(0) |  | A.Whitaker, J.W.Jeffery, <i>Acta Crystallogr.</i> (1967), 23 , 977. |
| FOMKIB01 | bis(N-isopropylsalicylaldiminato-N,O)-zinc(II) |  | F.A.Bottino, P.Finocchiaro, E.Libertini, G.Mattern, <i>Z.Kristallogr.</i> (1989), 187 , 71. |

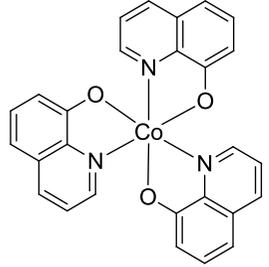
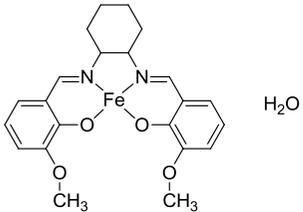
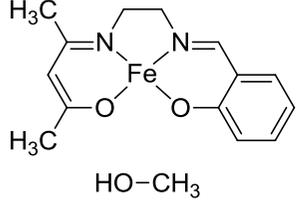
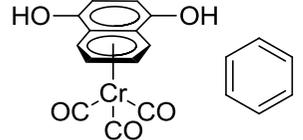
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| FURRAL | dicarbonyl-(η^5 -cyclopentadienyl)- (2,2'-bipyridine-N,N')-vanadium |  | S.Gambarotta, A.Chiesi-Villa, C.Guastini, <i>Inorg.Chem.</i> (1988), 27 , 99. |
| GIHWIE01 | chloro-(tris(2-pyridylmethyl)amine)-copper(I) |  | S.C.N.Hsu, S.S.C.Chien, H.H.Z.Chen, M.Y.Chiang, <i>J.Chin.Chem.Soc.(Taipei)</i> (2007), 54 , 685. |
| HEPSOL | (1,3-di-t-butyl-2,3-dihydroimidazol-2-ylidene)-(η^5 -cyclopentadienyl)-copper(I) |  | Hongping Ren, Xi Zhao, Shansheng Xu, Haibin Song, Baiquan Wang, <i>J.Organomet.Chem.</i> (2006), 691 , 4109. |
| JAFNAG | tetracarbonyl-(η^5 -pentamethyl-cyclopentadienyl)-vanadium |  | M.Herberhold, A.-M.Dietel, W.Milius, <i>Z.Naturforsch.,B:Chem.Sci.</i> (2003), 58 , 299. |
| JARNAS | (acetylacetonato)-dichloro-(η^5 -cyclopentadienyl)-titanium(IV) |  | Samkeun Lee, Kyoung-Chae Seo, Sock Sung Yun, Sung Kwon Kang, <i>J.Coord.Chem.</i> (2005), 58 , 695. |

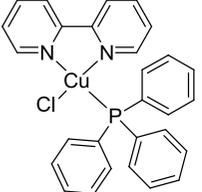
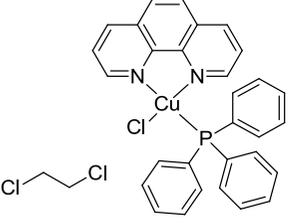
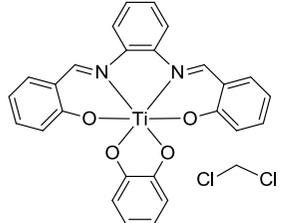
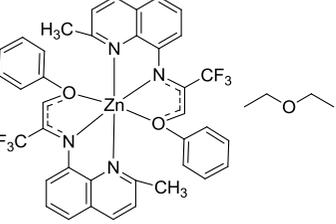
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| NCKLCN | nickelocene |  | P.Seiler, J.D.Dunitz, <i>Acta Crystallogr., Sect. B: Struct. Crystallogr. Cryst. Chem.</i> (1980), 36 , 2255. |
| NEZWEU | (1,4,7-trimethyl-1,4,7-triazacyclononane)-trichloroscandium |  | S.Hajela, W.P.Schaefer, J.E.Bercaw, <i>J.Organomet.Chem.</i> (1997), 532 , 45. |
| NIDCAR06 | bis(N,N-diethyldithiocarbamato-S,S')-nickel(II) |  | A.Husain, S.A.A.Nami, S.P.Singh, M.Oves, K.S.Siddiqi, <i>Polyhedron</i> (2011), 30 , 33. |
| NISALO01 | bis(salicylaldoximato-N,O)-nickel(II) |  | K.Mereiter, <i>CSD Communication(Private Communication)</i> |
| PESKEE01 | bis(benzoato-O,O')-(2,2'-bipyridine-N,N')-zinc(ii) |  | Geun Hee Eom, Hyun Min Park, Min Young Hyun, Seung Pyo Jang, Cheal Kim, Jun Ho Lee, Suk Joong Lee, Sung-Jin Kim, Youngmee Kim, <i>Polyhedron</i> (2011), 30 , 1555. |

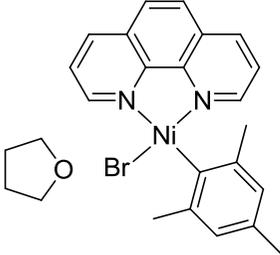
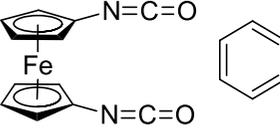
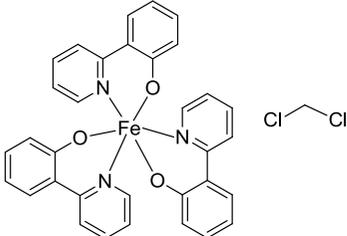
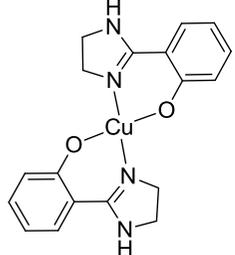
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| PMCCOC | dicarbonyl-(pentamethyl-cyclopentadienyl)-cobalt(I) |  | L.R.Byers, L.F.Dahl, <i>Inorg.Chem.</i> (1980), 19 , 277. |
| PVVBAY01 | bis(acetylacetonato)-diaqua-Iron(II) |  | J.Laugier, J.P.Mathieu, <i>Acta Crystallogr.,Sect.B:Struct.Crystallogr.Cryst.Chem.</i> (1975), 31 , 631. |
| QENJAV | cis-dichloro-(η^5 -pentamethylcyclopentadienyl)-(2,4-pentanedionato)-titanium(IV) |  | Samkeun Lee, Sung Kwon Kang, Seung Jae Lee, Sock Sung Yun, Tae-Sun Chang, <i>Bull.Korean Chem.Soc.</i> (2005), 26 , 1620. |
| RUJBUT | carbonyl-chloro-(2,2'-dipyridylamine)-copper(I) |  | F.Ugozzoli, A.M.M.Lanfredi, N.Marsich, A.Camus, <i>Inorg.Chim.Acta</i> (1997), 256 , 1. |

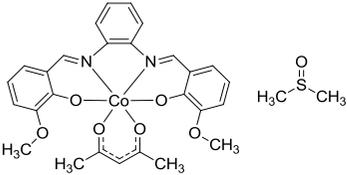
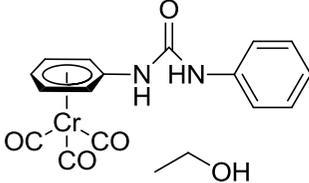
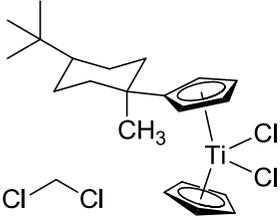
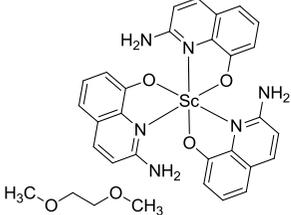
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| SAYVOE | bis(Nitrito-N)-(1,10-phenanthroline-N,N')-(2,4-pentanedionato-O,O')-cobalt(III) |  | Yun-Long Feng, Hong Lin, <i>Z.Kristallogr.-New Cryst.Struct.</i> (2005), 220 , 199. |
| TCBMNI | bis(N,N-dimethyldithiocarbamato)-nickel(II) |  | J.Lokaj, J.Garaj, V.Kettmann, V.Vrabel, <i>Collect.Czech.Chem.Commun.</i> (1980), 45 , 2147. |
| TESBUO | (η ⁵ -cyclopentadienyl)-tris(acetato-O,O')-titanium |  | Yujin Huang, N.Etkin, R.R.Heyn, T.T.Nadasdi, D.W.Stephan, <i>Organometallics</i> (1996), 15 , 2320. |
| TITODC10 | dicarbonyl-dicyclopentadienyl-titanium(II) |  | J.L.Atwood, K.E.Stone, H.G.Alt, D.C.Hrncir, M.D.Rausch, <i>J.Organomet.Chem.</i> (1977), 132 , 367. |

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| TROPSC | tris(tropolonato) scandium(III) |  | T.J.Anderson, M.A.Neuman, G.A.Melson, <i>Inorg.Chem.</i> (1974), 13 , 158. |
| VANPAB | bis(η^5 -pentamethyl-cyclopentadienyl)-(toluato-O,O')-scandium |  | M.A.St.Clair, B.D.Santarsiero, <i>Acta Crystallogr.,Sect.C:Cryst.Struct.Commun.</i> (1989), 45 , 850 |
| VIPGEG | tricarbonyl-(η^5 -pentamethyl-cyclopentadienyl)-manganese(I) |  | S.Fortier, M.C.Baird, K.F.Preston, J.R.Morton, T.Ziegler, T.J.Jaeger, W.C.Watkins, J.H.MacNeil, K.A.Watson, K.Hensel, Y.Le Page, J.-P.Charland, A.J.Williams, <i>J.Am.Chem.Soc.</i> (1991), 113 , 542 |
| YABGAK | dichloro-(6,6'-dimethyl-2,2'-bipyridyl)-iron(II) |  | B.C.K.Chan, M.C.Baird, <i>Inorg.Chim.Acta</i> (2004), 357 , 2776, |
| ZOSWEJ | chloro-pentacarbonyl-manganese(I) |  | P.T.Greene, R.F.Bryan, <i>J.Chem.Soc.A</i> (1971), 1559, |

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| AJUJIY03 | tris(8-quinolinolato-N,O)-cobalt(III) methanol solvate |  | D.Mandal, M.Mikuriya, Hoong-Kun Fun, D.Ray, <i>Inorg.Chem.Commun.</i> (2007), 10 , 657. |
| BOVNUW | (6,6'-dimethoxy-2,2'-diylbis(nitrilomethylidene)]diphenolato- $\kappa^4\text{O}^1, \text{N}, \text{N}', \text{O}^1$)-iron(II) monohydrate |  | Peng-Fei Yan, Yan Bao, Hong-Feng Li, Guang-Ming Li, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2009), 65 , m832. |
| CAPVUM | (2-(((2-((4-(hydroxy)pent-3-en-2-ylidene)amino)ethyl)imino)methyl)phenolato)-nickel methanol solvate |  | Jia-Zhong Wang, Jing-Chi Gu, Xue-Cheng Zhang, Jing Huang, Bi-Xue Zhu, <i>Wuji Huaxue Xuebao (Chin.) (Chin. J. Inorg. Chem.)</i> (2012), 28 , 321. |
| CECGIB | $(\eta^6\text{-}1,4\text{-dihydroxynaphthalene})\text{-tricarboxyl-chromium benzene solvate}$ |  | E.P.Kundig, A.E.Garcia, T.Lomberget, G.Bernardinelli, <i>Angew.Chem., Int.Ed.</i> (2006), 45 , 98. |

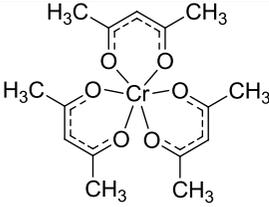
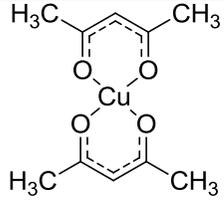
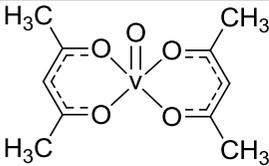
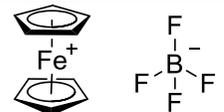
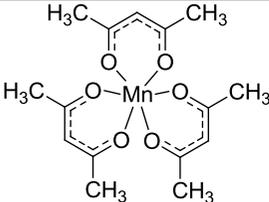
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| CEKHOP | 2,2'-bipyridine-chloro-triphenylphosphine-copper(i) monohydrate |  | B.E.Green, C.H.L.Kennard, G.Smith, B.D.James, A.H.White, <i>Acta Crystallogr., Sect. C: Cryst. Struct. Commun.</i> (1984), 40 , 426. |
| COXSOZ | chloro-(1,10-phenanthroline)-(triphenylphosphine)-copper 1,2-dichloroethane solvate |  | L.I.Panferova, F.M.Miloserdov, Anton Lishchynskyi, M.M.Belmonte, J.Benet-Buchholz, V.V.Grushin, <i>Angew.Chem., Int.Ed.</i> (2015), 54 , 5218. |
| DARCIK | (benzene-1,2-diolato)-(2,2'-(1,2-phenylenebis((nitrido)methylidene))bis(4-methylphenolato))-titanium dichloromethane solvate |  | A.Tzubery, E.Y.Tshuva, <i>Inorg.Chem.</i> (2012), 51 , 1796. |
| DOQGOH | bis(4,4,4-trifluoro-3-((2-methylquinolin-8-yl)amino)-1-phenylbut-2-en-1-onato)-zinc diethyl ether solvate |  | K.A.Gerling, N.M.Rezayee, A.L.Rheingold, D.B.Green, J.M.Fritsch, <i>Dalton Trans.</i> (2014), 43 , 16498. |

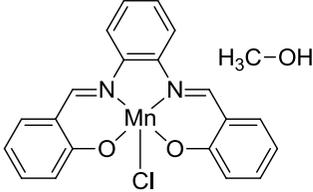
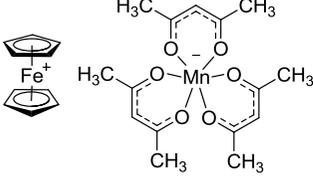
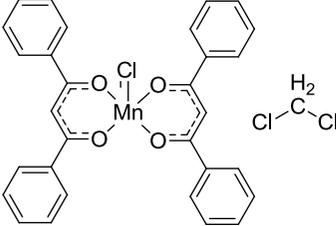
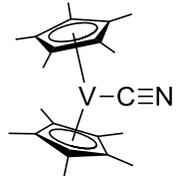
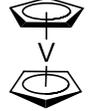
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| FIQXAG | bromo-mesityl-(1,10-phenanthroline)-nickel tetrahydrofuran solvate |  | D.G.Yakhvarov, A.Petr, V.Kataev, B.Buchner, S.Gomez-Ruiz, E.Hey-Hawkins, S.V.Kvashennikova, Y.S.Ganushevich, V.I.Morozov, O.G.Sinyashin, <i>J.Organomet.Chem.</i> (2014), 750 , 59. |
| FIXJON | 1,1'-diisocyanatoferrocene benzene solvate |  | A.R.Petrov, K.Jess, M.Freytag, P.G.Jones, M.Tamm, <i>Organometallics</i> (2013), 32 , 5946. |
| GAPMIT | tris(2-(o-hydroxyphenyl)-pyridine-O,N)-cobalt(III) dichloromethane solvate |  | P.Ganis, A.Saporito, A.Vitagliano, G.Valle, <i>Inorg.Chim.Acta</i> (1988), 142 , 75. |
| JEVMIH | bis(2-(4,5-dihydro-1H-imidazol-2-yl)phenolato-N,O)-zinc(ii) methanol solvate |  | Hong-Shan He, <i>Acta Crystallogr.,Sect.E:Struct.Rep.Online</i> (2007), 63 , m344. |

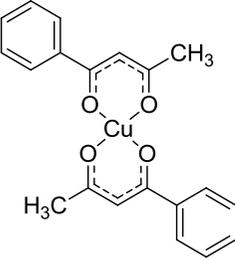
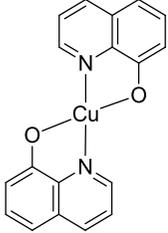
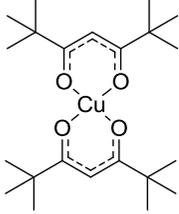
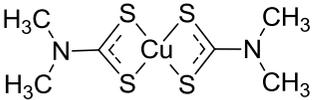
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| KUHRIQ | (acetylacetonato)-(2,2'-(ethane-1,2-diylbis(nitrilomethylidene))bis(6-methoxyphenolato))-cobalt(III) dimethyl sulfoxide solvate |  | C.Schieber, J.Howitt, U.Putz, J.M.White, C.L.Parish, P.S.Donnely, Seong-Seng Tan, <i>J.Biol.Chem.</i> (2011), 286 , 8555. |
| MAHWAV | tricarbonyl-(η^6 -1,3-diphenylurea)-chromium ethanol solvate |  | Xiaohui Tian, Li Song, Yizhong Yuan, Jiaping Lin, <i>Organometallics</i> (2010), 29 , 509. |
| MOLPOT | (η^5 -(4-t-butyl-1-methyl-1-cyclohexyl)cyclopentadienyl)-dichloro-(η^5 -cyclopentadienyl)-titanium(IV) dichloromethane solvate |  | A.Gansauer, I.Winkler, D.Worgull, D.Franke, T.Lauterbach, A.Okkel, M.Nieger, <i>Organometallics</i> (2008), 27 , 5699. |
| OVIMAI | tris(2-aminoquinolin-8-olato)-scandium 1,2-dimethoxyethane solvate |  | M.A.Katkova, T.V.Balashova, A.P.Pushkarev, I.Yu.Ilyin, G.K.Fukin, E.V.Baranov, S.Yu.Ketkov, M.N.Bochkarev, <i>Dalton Trans.</i> (2011), 40 , 771. |

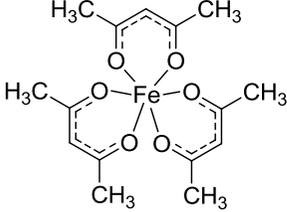
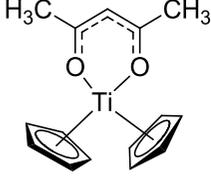
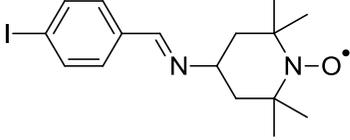
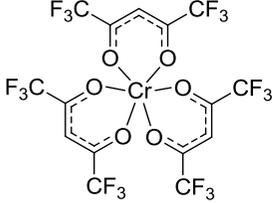
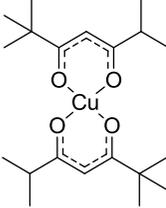
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| PEKNOK | (2-(((2,6-dimethylphenyl)imino)methyl)-N,N-dimethylaniline)-dibromonickel dichloromethane solvate | | Jun-Kai Zhang, Peng-Chao Wang, Xiao-Wei Wang, Liang Wang, Jun-Cai Chen, Zhi-Wu Zheng, Yong-Ping Niu, <i>J.Organomet.Chem.</i> (2011), 696 , 3697. |
| QOFHOI | tris(8-oxyquinoline)-vanadium(III) methanol solvate | | M.J.Manos, A.J.Tasiopoulos, C.Raptopoulou, A.Terzis, J.D.Woollins, A.M.Z.Slawin, A.D.Keramidas, T.A.Kabanos, <i>J.Chem.Soc.,Dalton Trans.</i> (2001), 1556. |

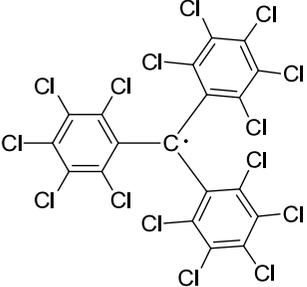
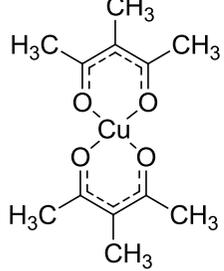
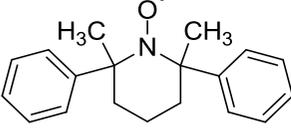
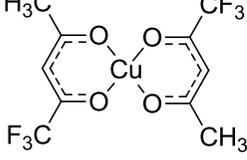
Table S5 Crystal structure details for 27 open shell pairs.

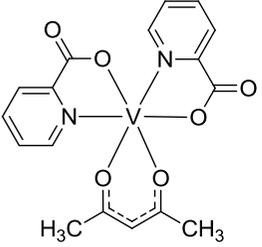
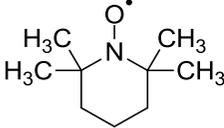
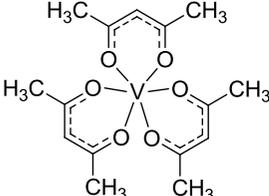
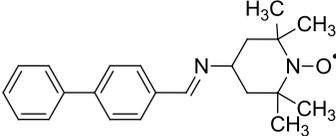
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|--------------|---------------------------------------|--|--|
| ACACCR07 | tris(acetylacetonato)-chromium(III) |  | L.S.von Chrzanowski, M.Lutz, A.L.Spek, <i>Acta Crystallogr., Sect. C: Cryst. Struct. Commun.</i> (2007), 63 , m377. |
| ACACCU02 | bis(acetylacetonato)-copper(II) |  | G.Berry, G.Callon, B.Gowans, J.N.Low, R.Smith, <i>CSD Communication(Private Communication)</i> (2004) |
| ACACVO04 | bis(acetylacetonato)-oxo-vanadium(IV) |  | M.Hoshino, A.Sekine, H.Uekusa, Y.Ohashi, <i>Chem.Lett.</i> (2005), 34 , 1228. |
| AFALID01 | ferrocenium tetrafluoroborate |  | S.R.Posner, L.C.Lorson, A.R.Gell, B.M.Foxman, <i>Cryst.Growth Des.</i> (2015), 15 , 3407. |
| ACACMN2 1 | tris(acetylacetonato)-manganese(III) |  | B.R.Stults, R.S.Marianelli, V.W.Day, <i>Inorg.Chem.</i> (1979), 18 , 1853. |

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| AFATAE | chloro-(2,2'-(1,2-phenylenebis((nitrilo)methylidene))diphenolato)-manganese(III) methanol solvate |  | H.Lin, J.-G.Wang, H.-T.Shi, Q.Chen, Q.-F.Zhang, <i>Acta Crystallogr., Sect. E: Struct. Rep. Online</i> (2013), 69 , m404. |
| AGEFEX | ferrocenium tris(hexafluoroacetylacetonato)-manganese(II) |  | J.R.Bryant, J.E.Taves, J.M.Mayer, <i>Inorg. Chem.</i> (2002), 41 , 2769. |
| BEPRET | bis(dibenzoylmethane)-chloro-manganese(III) dichloromethane solvate |  | G.Aromi, M.J.Knapp, J.-P.Claude, J.C.Huffman, D.N.Hendrickson, G.Christou, <i>J. Am. Chem. Soc.</i> (1999), 121 , 5489. |
| CIRSEB | cyano-bis(η ⁵ -pentamethyl-cyclopentadienyl)-vanadium |  | S.Gambarotta, C.Floriani, A.Chiesi-Villa, C.Guastini, <i>Inorg. Chem.</i> (1984), 23 , 1739. |
| CPNDYV07 | bis(η ⁵ -cyclopentadienyl)-vanadium |  | A.L.Spek, <i>CSD Communication (Private Communication)</i> (2000) |

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| CUBEAC01 | bis(benzoylacetato)-copper(II) |  | S.K.Dey, B.Bag, Zhongyuan Zhou, A.S.C.Chan, S.Mitra, <i>Inorg.Chim.Acta</i> (2004), 357 , 1991. |
| CUQUIN05 | bis(8-hydroxyquinolino-N,O)-copper(II) |  | S.Ammor, G.Coquerel, G.Perez, F.Robert, <i>Eur.J.Solid State Inorg.Chem.</i> (1992), 29 , 445. |
| DERNOD05 | bis(2,2,6,6-tetramethyl-3,5-heptanedionato)-copper(II) |  | M.Hamid, M.Mazhar, M.Zeller, A.D.Hunter, <i>CSD Communication(Private Communication)</i> (2005) |
| DMTCCU | bis(N,N-dimethyldithiocarbamate)-copper(II) |  | F.W.B.Einstein, J.S.Field, <i>Acta Crystallogr.,Sect.B:Struct.Crystallogr.Cryst.Chem.</i> (1974), 30 , 2928. |

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|----------|---|--|---|
| FEACAC03 | tris(acetylacetonato)-iron(III) |  | M.-L.Hu, Z.-M.Jin, Q.Miao, L.-P.Fang, <i>Z.Kristallogr.-New Cryst.Struct.</i> (2001), 216 , 597. |
| HIDPOZ | (acetylacetonato-O,O')-titanocene(III) |  | A.M.Bond, R.Colton, U.Englert, H.Hugel, F.Marten, <i>Inorg.Chim.Acta</i> (1995), 235 , 117. |
| HIRNEB | 4-(4-fluorophenyl)-methyleneamino-2,2,6,6-tetramethylpiperidin-1-oxyl radical |  | F.Iwasaki, J.H.Yoshikawa, H.Yamamoto, E.Kan-nari, K.Takada, M.Yasui, T.Ishida, T.Nogami, <i>Acta Crystallogr.,Sect.B:Struct.Sci.</i> (1999), 55 , 231. |
| IGAGEC | tris(1,1,1,5,5,5-hexafluoroacetylacetonato)-chromium(III) |  | P.G.Jessop, M.M.Olmstead, C.D.Ablan, M.Grabenauer, D.Sheppard, C.A.Eckert, C.L.Liotta, <i>Inorg.Chem.</i> (2002), 41 , 3463. |
| IPEZOS | bis(2,2,6-trimethylheptane-3,5-dionato)-copper(II) |  | M.J.Delarosa, K.S.Bousman, J.T.Welch, P.J.Toscano, <i>J.Coord.Chem.</i> (2003), 56 , 1339. |

| | | | |
|--------------|---|--|---|
| JIYKEH01 | perchlorotriptyl radical |  | J.Guasch, X.Fontrodona, I.Ratera, C.Rovira, J.Veciana, <i>Acta Crystallogr., Sect.C:Cryst.Struct.Commun.</i> (2013), 69 , 255. |
| MACACU1 0 | bis(3-methylpentane-2,4-dionato)- copper(II) |  | I.Robertson, M.R.Truter, <i>J.Chem.Soc.A</i> (1967), 309. |
| POXYUW | rac-trans-2,6-dimethyl-2,6- diphenylpiperidine N-oxide |  | J.Einhorn, C.Einhorn, F.Ratajczak, A.Durif, M.-T.Averbuch, J.-L.Pierre, <i>Tetrahedron Lett.</i> (1998), 39 , 2565. |
| QQQBWP0 3 | trans-bis(1,1,1-trifluoropentan- 2,4-dionato)-copper(ii) |  | R.E.Marsh, <i>Acta Crystallogr.,Sect.B:Struct.Sci.</i> (2009), 65 , 782. |

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|----------|---|---|--|
| SUZSAH | (acetylacetonato-O,O')-bis(picolinato-N,O)-manganese(III) |  | T.Nakamura, K.Niwa, S.Usugi, H.Asada, M.Fujiwara, T.Matsushita, <i>Polyhedron</i> (2001), 20 , 191 |
| TMPPIO13 | 2,2,6,6-tetramethylpiperidine-1-oxyl |  | S.Spirk, F.Belaj, T.Madl, R.Pietschnig, <i>Eur.J.Inorg.Chem.</i> (2010), 289. |
| VAACAC02 | tris(2,4-pentanedionato-O,O')-vanadium(III) |  | C.A.L.Filgueiras, A.Horn Junior, R.A.Howie, J.M.S.Skakle, J.L.Wardell, <i>Acta Crystallogr.,Sect.E:Struct.Rep.Online</i> (2001), 57 , m157 |
| YUJYIL01 | 4-((4-phenylbenzylidene)amino)-2,2,6,6-tetramethylpiperidine-1-oxyl radical |  | F.Iwasaki, J.H.Yoshikawa, H.Yamamoto, E.Kan-nari, K.Takada, M.Yasui, T.Ishida, T.Nogami, <i>Acta Crystallogr.,Sect.B:Struct.Sci.</i> (1999), 55 , 231 |