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- Stereocontrolled synthesis of  $\alpha$ -C-galactosamine derivatives promoted by samarium diiodide: an example of chelation controlled C-glycosylation, 1883
- Helical transition-metal compounds: preorganisation of the ligands by a paracyclophane group, 1885
- Complete metal-mediated reduction of the triple bond of a phosphaalkyne: X-ray structure of  $[\text{Ru}(\text{PHFCH}_2\text{Bu}^t)\text{Cl}(\text{CO})\text{-}(\text{CNC}_6\text{H}_5\text{Me}_2-2,6)(\text{PPh}_3)_2]\text{BF}_4\text{-CH}_2\text{Cl}_2$ , 1895
- Synthesis and structure of the adduct  $\text{Cl}_3\text{AsO}\text{-AsF}_5$ , 1897
- Directional self assembly of a double-helical complex of a solubilised septipyridine, 1917
- New intermediates for the synthesis of alkene polymerization catalysts: the complex  $[\text{Mg}_4\{\mu_3,\eta^2\text{-OCH}_2\text{CH}(\text{CH}_2)_3\text{O}\}_2\{\mu,\eta^2\text{-OCH}_2\text{CH}(\text{CH}_2)_3\text{O}\}_4\text{Cl}_2]$ ; crystal structure and properties, 1923
- Reagent- and chelation-controlled diastereoselective aziridination of electron-rich alkenes by 3-acetoxyamino-2-(1-hydroxy-2,2-dimethylprop-1-yl)quinazolin-4(3*H*)-one, 1935
- Structures of the potassium aluminates  $[\{\text{K}_2(\text{Me}_3\text{AlOBU}^t)_2\text{pmdeta}\}]_\infty$  and  $[\{\text{K}(\text{pmdeta})_2\}^+(\text{AlMe}_4)^-]$ : how the nature of the alane reagent determines which of these products form from alkoxide-containing reaction mixtures, 1951
- Asymmetry in the boronic acid Mannich reaction: diastereocontrolled addition to chiral iminium species derived from aldehydes and (*S*)-5-phenylmorpholin-2-one, 1953
- New organic metals based on vinylenedithio-annulated diselenadithiafulvalene derivatives, 1955
- Gold clustering at the methylthiolate anion, 1959
- Synthesis and reactivity of the first stable chromium(VI) alkylidene complexes, 1963
- Rearrangement of dithianylcyclobutachromanol derivatives to 1,2,2a,8,9,9a-hexahydrocyclobuta[*b*][1]benzoxepin-8,9-dione, 1965
- Fluorescent switches with high selectivity towards sodium ions: correlation of ion-induced conformation switching with fluorescence function, 1967
- Hydrotris(methimazolyl)borate, a soft analogue of hydrotris-(pyrazolyl)borate. Preparation and crystal structure of a novel zinc complex, 1975
- Loosely bonded adducts of plumbocene; structures and solution dynamics of  $[(\eta\text{-C}_5\text{H}_5)_2\text{Pb-tmeda}]$  and  $[(\eta\text{-C}_5\text{H}_5)_2\text{Pb-4,4'-(Me}_2\text{bipy)}]$  (tmeda =  $\text{Me}_2\text{NCH}_2\text{CH}_2\text{NMe}_2$ , 4,4'-(*Me*<sub>2</sub>bipy) = 4,4'-dimethylbipyridine), 1977
- Decamethylnickelocenium hydrogen-7,7,8,8-tetracyanoperfluoro-*p*-quinodimethandiide: isolation of the protonated weak base  $[\text{HTCNQF}_4]^-$ , 1979
- A new optical resolution method: coordinative resolution of mandelic acid esters. The crystal structure of calcium hydrogen (2*R*,3*R*)-*O*,*O'*-dibenzoyl tartrate-2(*R*)-(-)-methyl mandelate, 1983
- 1,2-*N,N*-Dimethylaminomethylferrocenyl as a ligand towards titanium and vanadium, 1985
- The first metal complexes containing the 1,4-cyclohexa-2,5-dienyl ligand (benzene 1,4-dianion); synthesis and structures of  $[\text{K}(18\text{-crown-6})][\text{Ln}(\eta^5\text{-C}_5\text{H}_5(\text{SiMe}_3)_2-1,3)_2(\text{C}_6\text{H}_6)]$  (Ln = La, Ce), 1987
- Reactivity of a tungsten(II) aryloxide with imines, ketones and aldehydes, 2013
- Unusual cation radical salts of nonplanar bis(1,3-dithiole) donors incorporating solvent molecules, 2021
- $[\text{Li}(\text{NH}_3)_4]_3\text{P}_{11}\cdot 5\text{NH}_3$ : preparation and crystal structure of a Zintl compound ammoniate with a very high ammonia content, 2023
- Crystallographic evidence for the diene character of  $\text{C}_2\text{B}_{10}\text{H}_{10}\text{C}_4\text{H}_4$  ('benzocarborane') and a Diels-Alder reaction of its anionic *nido*-analogue,  $[\text{C}_2\text{B}_9\text{H}_{10}\text{C}_4\text{H}_4]^-$ : crystal structures of  $\text{C}_2\text{B}_{10}\text{H}_{10}\text{C}_4\text{H}_4$  and  $\text{C}_2\text{B}_{10}\text{H}_{10}\text{C}_4\text{H}_6$ , 2033
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- Protonation of an internal alkyne produces a terminal alkene: the reactivity of  $[\text{Mo}(\eta^2\text{-MeCCMe})(\text{Ph}_2\text{PCH}_2\text{CH}_2\text{PPh}_2)_2]$ , 2039
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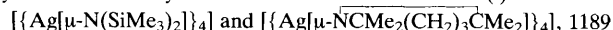
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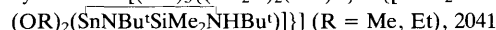
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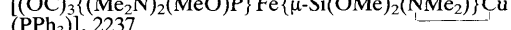
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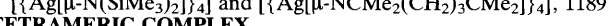
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