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# LIST OF ABBREVIATIONS

| Symbols and Abbreviations | Full Words/Definitions |
|---|---|
| ··· | Non-covalent interaction or non-bonded interatomic separation |
| Å | Angstrom |
| λ | Lambda |
| ν | Wavenumber ($cm^{-1}$) |
| ε | Absorption coefficient |
| $\chi_M T$ | Magnetic susceptibility as a function of temperature |
| $\chi_M$ | Magnetic susceptibility equal to M/H per mole of the complex |
| S | Overall spin state of the molecular substance |
| T | Temperature |
| P | Paring energy |
| $\Delta_{oct}$ | Ligand field splitting parameter |
| $t_{2g}$ | triply degenerate orbital level |
| $e_g$ | Doubly degenerate orbital level |
| Σ | Sigma/Octahedral distortion parameter |
| Θ | Theta/ Trigonal twist |
| $O_h$ | Octahedral |
| $D_{3h}$ | Trigonal prismatic |
| $\phi_i$ | Ligand-metal-ligand angles |
| $\theta_i$ | Pseudo-threefold axis |
| $\gamma_{HS}$ | High spin fraction |
| ca. | Approximately |

# LIST OF ABBREVIATIONS (Continued)

| Symbols and Abbreviations | Full Words/Definitions |
|---|---|
| $Cl^-$ | Chloride ion |
| $Br^-$ | Bromide ion |
| $I^-$ | Iodide ion |
| $NO_3^-$ | Nitrate ion |
| $ClO_4^-$ | Perchlorate ion |
| NO | Nitric oxide |
| CN | Cyanide |
| NCS | Thiocyanate |
| $PF_6^-$ | hexafluorophosphate |
| $Bh_4^-$ | Tetraphenylborate |
| FT-IR | Fourier Transform Infrared |
| UV-Vis | Ultraviolet-Visible |
| PXRD | Powder X-ray diffraction |
| SQUID | Superconducting Quantum Interference Device |
| SCO | Spin crossover |
| ST | Spin transition |
| HS | High spin |
| LS | Low spin |
| mHS | Mostly high spin |
| salBzen-5-OMe | 2-{[2-(benzylamino]ethylimino]methyl} phenolate |
| salPren-5-OMe | 2-{[2-(propylamino)ethylimino]methyl} phenolate |
| OMe | Methoxy |

# LIST OF ABBREVIATIONS (Continued)

| Symbols and Abbreviations | Full Words/Definitions |
|---|---|
| salRen | N-Alkylaminoethylamine and a salicylaldehyde derivative |
| salEen | 2-{[2-(ethylamino)ethylimino]methyl}-4-phenolate |
| LIESST | light-induced excited spin state trapping |
| EF | Two edge-to-face |
| OFF | Offset face-to-face |
| P4AE | Parallel fourfold aryl embraces |
| DMF | Dimethyformamide |
| EtOH | Ethanol |
| $CHCl_3$ | Chloroform |
| $CH_2Cl_2$ | Dichloromethane |
| Oe | Oersteds |
| $d_{norm}$ | Distances normalized |
| $E^{o'}$ | Electrode potential measured at 1 atmosphere pressure |
| AgCl | Silver chloride |
| LiCl | Lithium chloride |
| $CaH_2$ | Calcium hydride |
| $[Fe(\eta\text{-}C_5H_5)_2]$ | Ferrocene |
| $[N\text{-}n Bu_4][PF_6]$ | Tetrabutylammonium hexafluorophosphate. |
| LMCT | Ligand-to-metal charge transfer |
| et al | et alia, in Latin meaning “and others” |