

# Divalent Europium in $\infty[\text{Eu}(\text{Pz})_2(\text{Pz-H})_2]$ : The First Unsubstituted Pyrazolate and Cp Analogous Pyrazole Complex of a Rare Earth Element in One<sup>#</sup>

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Bright yellow crystals of  $\infty[\text{Eu}(\text{Pz})_2(\text{Pz-H})_2]$  were obtained by the reaction of europium metal with a melt of pyrazole. According to single crystal X-ray analysis the compound exhibits a one-dimensional chain structure including both unsubstituted pyrazolate anions as well as unsubstituted neutral pyrazole molecules as ligands. The latter are isoelectronic with the cyclopentadienyl anion and link two adjacent Europium(II) centers in an  $\eta^1$ - $\sigma$ -bridging as well as Cp analogous  $\eta^5$ - $\pi$ -binding mode, whilst the pyrazolate anions are N- $\eta^1$ -coordinating terminal ligands. In addition to the crystal structure, MIR, FarIR, Raman and UV/vis spectroscopic data are presented.

*Key words:* Lanthanides, Pyrazole, Crystal Structure, Europium