Sulfur was long believed to underdo valence expansion,\cite{1} not obeying the eight-electron rule.\cite{2} In a charge density investigation of sulfate we could disprove this theorem.\cite{3} The same is valid for polyimido sulfur compounds S(NR)\textsubscript{n}m\textsuperscript{−} with n=2-4; m=1,2.\cite{4} In the tetraimido sulfuric acid H\textsubscript{2}S(NtBu)\textsubscript{4} we showed recently that most in the formal S=NtBu and S-N(H)tBu is electrostatics on top of covalent \( \sigma \)-bonding but virtually no \( \pi \)-bonding.\cite{5} This lack of orbital control is beneficial for single-molecule magnets, because the N-[M]-N angle can ideally be adapt to the metal’s requirements to increase magnetic anisotropy.\cite{6} This way we could optimize d- and f-metal SMMs.\cite{7}

\cite{1} Pauling, L. The nature of the chemical bond; Cornell University Press, Ithaca, NY, 1939.
\cite{2} Lewis, G. N. J. Am. Chem. Soc. 1916, 38, 762-785.