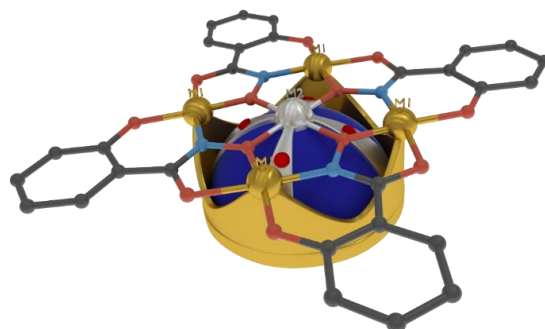


## Short Abstract:

Metallacrown complexes (MCs) have been extensively studied in recent years for their coordination ability with hydroxamic acid and derivatives, especially with first-row transition metal ions. Taking advantage of host-guest chemistry, the atomic arrangement in MCs can be adjusted, allowing tunable magnetic exchange between metal ions within the ring structure. By implementing metal ions that can make a significant contribution with high single-ion anisotropy, these systems exhibit SMM behaviour and thus promise future applications in data storage, quantum computing and molecular electronics as discussed in physics, chemistry and materials science.



**Figure:** artistic representation of a metallacrown