GESELLSCHAFT DEUTSCHER CHEMIKER

Ortsverband Osnabrück

"Versatile (Thio)-Ethers as Efficient Luminophores – From Molecular Recognition to Additive Manufacturing"

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Aromatic thioethers have been found to be a versatile and easily accessible platform for the generation of luminescent compounds. First reports from *Ceroni et al*. showed that quantum yields close to unity with remarkably long lifetimes were achievable.[1] In 2017 we discovered that modification of the central core motif with electron withdrawing groups (e.g. -CN) leads to a bathochromic shift.[2] Based on this concept numerous examples have been published. More than that, we were able to show applications in molecular recognition of oligoamines[3] and cyclodextrins[4], binding to proteins and cells[5] as well as applications in materials science and additive manufacturing. In addition, photo-responsive behavior of these luminophores leads to phosphors with ultralong emission afterglow able to be used for the generation of adaptable materials.

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