

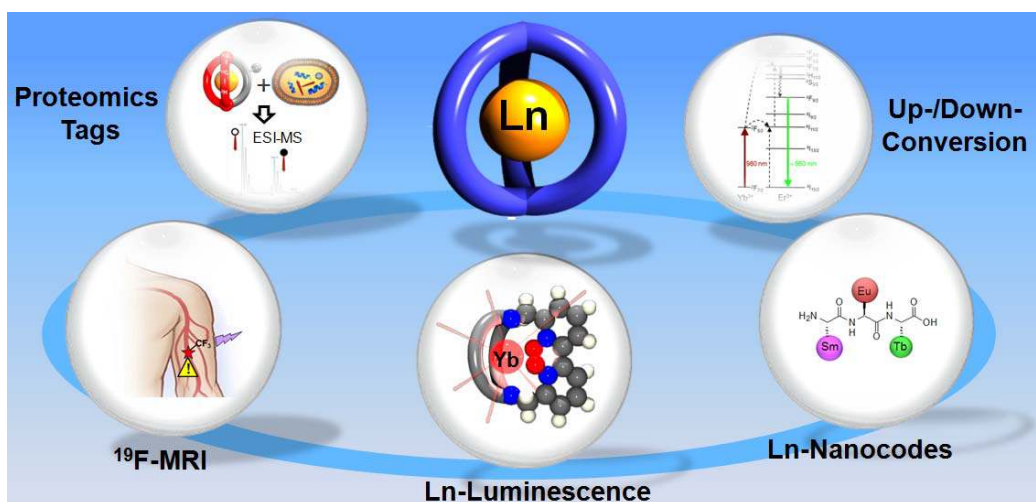
Lanthanoid Cryptates – Exciting Building Blocks for Functional Materials

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Molecular complexes with trivalent lanthanoid cations (Ln^{3+}) are very useful building blocks for the development of functional materials with unique magnetic and/or luminescence properties. Lanthanoid complexes have been used for some time now in technologically and medically important applications such as in contrast agents for magnetic resonance imaging (MRI) or as responsive luminescence probes in biomedical diagnostics. In this talk, recent progress in the Seitz lab will be presented for the development of new and emerging applications and for the improvement of existing avenues of applied research. The topics will range from improved near-infrared luminophores to enantiopure luminophores emitting "chiral" light to the development of molecular nanocodes on the basis of heterooligonuclear lanthanoid peptides.



Most relevant papers:

- 1 C. Doffek, N. Alzakhem, C. Bischof, J. Wahsner, T. Güden-Silber, J. Lügger, C. Platas-Iglesias, M. Seitz, *J. Am. Chem. Soc.* **2012**, 134, 16413.
- 2 C. Doffek, M. Seitz, *Angew. Chem. Int. Ed.* **2015**, 54, 9719.
- 3 C. Wang, S. Otto, M. Dorn, E. Kreidt, J. Lebon, L. Srsan, P. Di Martino-Fumo, M. Gerhards, U. Resch-Genger, M. Seitz, K. Heinze, *Angew. Chem. Int. Ed.* **2018**, 57, 1112.
- 4 E. Kreidt, L. Arrico, F. Zinna, L. Di Bari, M. Seitz, *Chem. Eur. J.* **2018**, 24, 13556.
- 5 C. Kruck, P. Nazari, C. Dee, B. S. Richards, A. Turshatov, M. Seitz, *Inorg. Chem.* **2019**, 58, 6959.