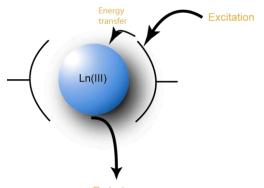
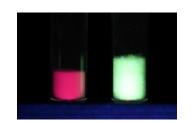


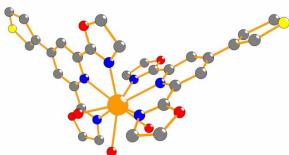
## Tailoring of ligand functionalization for improved Ln(III)centered emission in Eu(III) and Tb(III) complexes

Ana de Bettencourt-Dias



f-f transitions in lanthanide ions Ln(III) lead to characteristic light emission with pure and intense colors. To harness this property ligands are utilized as sensitizers. Our group develops thiophene-derivatized ligands for Ln(III)-based precursors for luminescent polymers. We study the solid state structure and photophysical characteristics of the developed complexes and of their solutions.





|    | Φ/%  | τ / <b>ms</b> | 15 / cm-1 | <sup>3</sup> T / cm <sup>-1</sup> |
|----|------|---------------|-----------|-----------------------------------|
| Eu | 76.2 | 2.097         | 28,310    | 21,080                            |
| Tb | 58.6 | 0.367/0.019   |           |                                   |

