



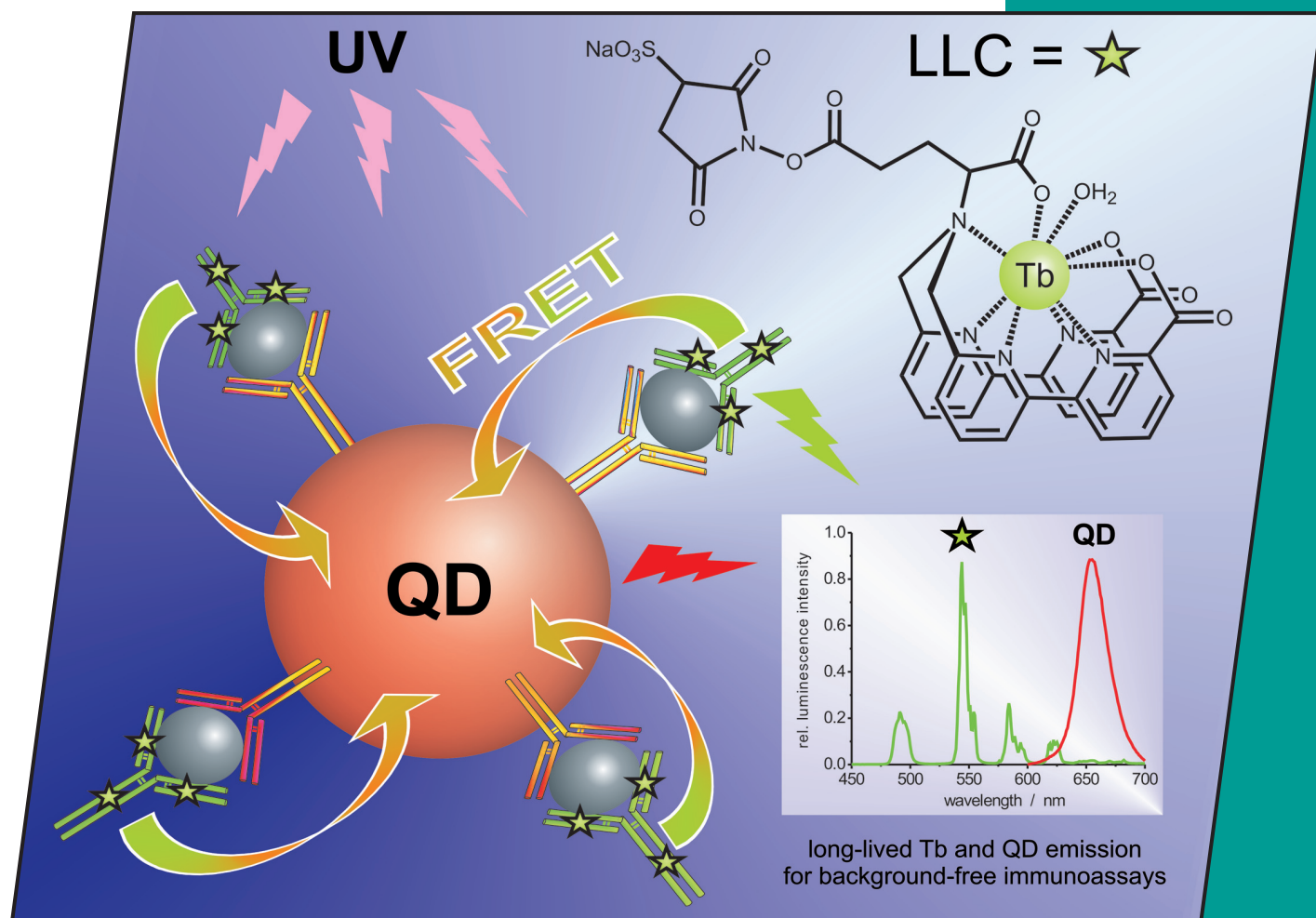
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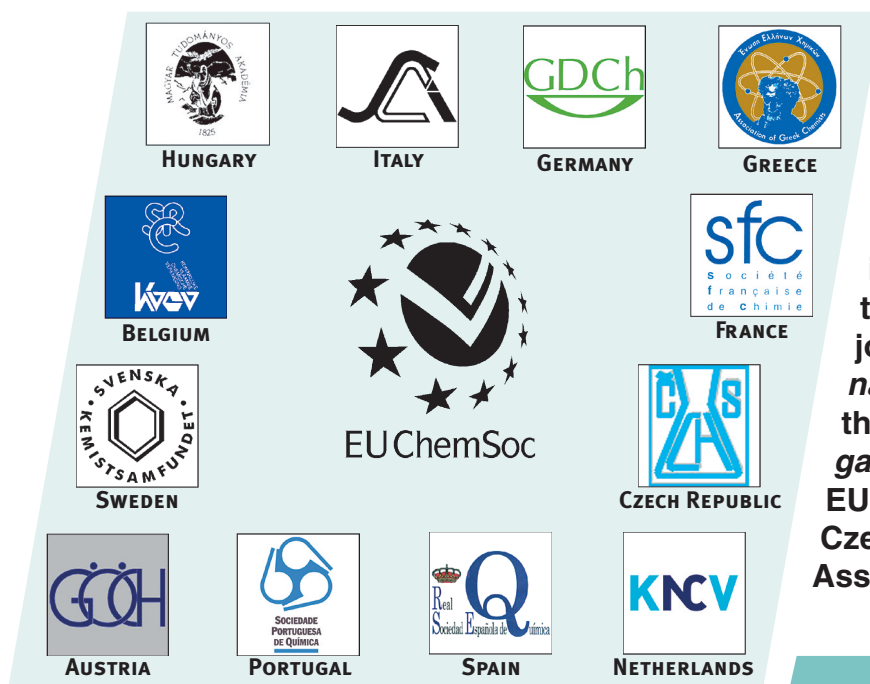
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Cover Picture / Microreview

Loïc J. Charbonnière and Niko Hildebrandt

Lanthanide Complexes and Quantum Dots



The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows the schematic realization of a homogeneous fluoroimmunoassay using Förster resonance energy transfer (FRET) from luminescent lanthanide complexes (LLCs) – an example of a Tb complex is shown in the top right corner) to a biocompatible CdSe/ZnS quantum dot (QD). Excitation of the immunocomplex formed by the association of QD-labeled antibodies, antigen and LLC-labeled antibodies by UV light (e.g. 315 nm) leads to a long-lived Tb and QD luminescence (luminescence spectra shown in the bottom right corner) due to FRET sensitization by the LLCs. This new immunoassay approach opens doors to extremely sensitive background-free fluoroimmunoassays suitable for multiplexing by using several different QDs as FRET acceptors with a single LLC donor. Details are discussed in the Microreview by L. J. Charbonnière and N. Hildebrandt on p. 3241ff.

