LINEAR AND NONLINEAR ACCESS TO EMISSIVE EXCITED-STATES OF 1,10-PHENANTHROLINE DERIVATIVES AND RELATED Ru(II) (Nano)EDIFICES

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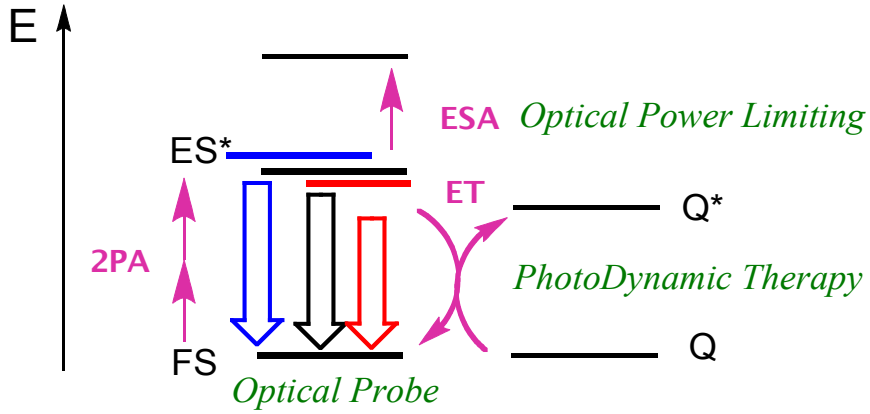
Our research concerns either fundamental aspects than potential applications of photophysical, and especially luminescence properties, of new molecular and supramolecular edifices.[1] Will be described, (*i*) the luminescent characteristics of 5-substituted-1,10-phenanthroline derivatives; the huge solvatochromism of some of these compounds[2] give them very interesting properties for applications as optical sensors. One compound is also the siege of an original solvent-tuned dual emission,[3] (*ii*) fluorenyl Ru(II) complexes-based ^{3}MLCT excited-states (ES*) and their absorption (ESA), and lifetime (τ) properties for several applications such as two-photon excited luminescence or photodynamic therapy (2PE-PDT),[4] optical power limiting,[5] and (*iii*) multifunctional nano-edifices[6] with novel properties; a switch from two-photon absorption of Ru(II) coordination complexes to saturable absorption of the related decorated-gold nanoparticles was recently highlighted.[7]



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