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Dr S. A. Kozimor
Guest Editor *Inorganic Chemistry Forum*
Innovative f-Element Chelating Strategies

Geneva, 15th March 2019

Concern: Submission of an invited contribution to *Inorganic Chemistry Forum*: **Innovative f-Element Chelating Strategies**

Dear Editor,

I enclose with this letter one electronic copy of a manuscript entitled '**Neutral Heteroleptic Lanthanide Complexes for Unravelling Host-Guest Assemblies in Organic Solvents: The Law of Mass Action Revisited.**' which I would like to be considered for publication in *Inorganic Chemistry* within the frame of *Inorganic Chemistry Forum*: **Innovative f-Element Chelating Strategies**. This work aims at tackling a problem often encountered when investigating host-guest assemblies occurring in non-polar solutions: the variation of the equilibrium reaction quotients during titration procedures which prevents the estimation of reliable thermodynamic stability constants. This limitation is most of the time overlooked by averaging the different equilibrium reaction quotients to a single approximate stability constant, a problematic procedure when the dispersion of experimental data reaches one or two orders of magnitudes. We consider in this contribution the well-known formation of highly luminescent neutral lanthanide β-diketonate adducts with aromatic antenna ligands as a guide for exploring the physical origins of this recurrent deadlock. We also propose some practical patches so that experimental coordination chemists can safely address stability constants and speciation in organic solvents.

Thanking you in advance for your consideration of this manuscript, I remain.

Yours sincerely

Claude Piguet
Professor of Chemistry

Enclosure: Electronic files containing, text, figures and supporting information