

Editor's comments

Pursuing efforts to shed light on the work of the next generation of Mössbauer spectroscopists, we discover this month Ms. **Li Sun** and **Weiyang Li**, both from IMCN at UCLouvain in Belgium, who have recently discovered a new family of iron(II) complexes able to colorimetric detect a variety of molecules, including toxic industrial chemicals, hazardous gases, etc. These two early stage researchers are both supported by the Chinese Scholarship Council in the frame of their PhD studies. Knowing better their field of investigation is expected to generate future opportunities by focusing on new topics where Mössbauer spectroscopy could be used, and stimulate new ideas and concepts for our readers, which can benefit to our community.

This new family of iron(II) sensors was born in Belgium in 2014, when Dr. **Anil D. Naik** (a postdoctoral researcher at IMCN at that time, now working for the chemical industry at Gloucester, UK) discovered a material able to switch its spin state in contact to vapor solvents while designing a nitrogen rich bis 1,2,4-triazole-tetrazole ligand (*Inorg. Chem.* **2014**, *53*, 1263-1265). Such study attracted considerable interest given that the ligand field of this material was not appropriate to exhibit any spin state crossover behavior, and was pursued by Dr. **Yunnan Guo** (FNRS postdoc at IMCN Belgium, before being appointed assistant professor at Zhejiang Sci-Tech University, China) on powder and crystal state (*J. Mater. Chem. C.* **2018**, *6*, 3895-3900 and *Inorg. Chem. Front.* **2021**, *8*, 3532-3546). Later, Li Sun and Weiyang Li discovered that the original material from 2014, actually belong to a new family of sensors which they investigate in the course of their PhD Studies. Their account outline how useful can be **⁵⁷Fe Mössbauer spectroscopy** for probing the spin and oxidation state of these new materials.

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