

IRON(II) SPIN CROSSOVER SENSORS FOR IN-FIELD APPLICATIONS

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In recent years, more attention has been focused on the efficient detection of chemical pollutants, especially small volatile organic compounds (VOCs) and hazardous gases (HGs), as well as bacterial agents.¹ This area is very challenging because VOCs are relatively volatile at room temperature, even at low concentration levels. Such species can enter the body through normal breathing, and cause serious health issues.² Our investigations led us to focus on a new series of azole based coordination polymers,³ for which intriguing iron(II) spin crossover properties were disclosed.⁴ In this talk, we will review latest advances in this area, highlighting the impact of ⁵⁷Fe **Mössbauer spectroscopy** for quantitative analysis of spin states of selected iron complexes, used as sensors for various toxic industrial chemicals (TICs).^{2,5}

References

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