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Title: Synthesis and Mössbauer spectroscopic investigation of copper-manganese ferrite catalysts for water-gas shift reaction and methanol decomposition

Authors: Nikolay Velinov, Tanya Petrova, Izabela Genova, Ivan Ivanov, Tanya Tsoncheva, Vasko Idakiev, Boris Kunev, Ivan Mitov



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Synthesis and Mössbauer spectroscopic investigation of copper-manganese ferrite catalysts for water-gas shift reaction and methanol decomposition

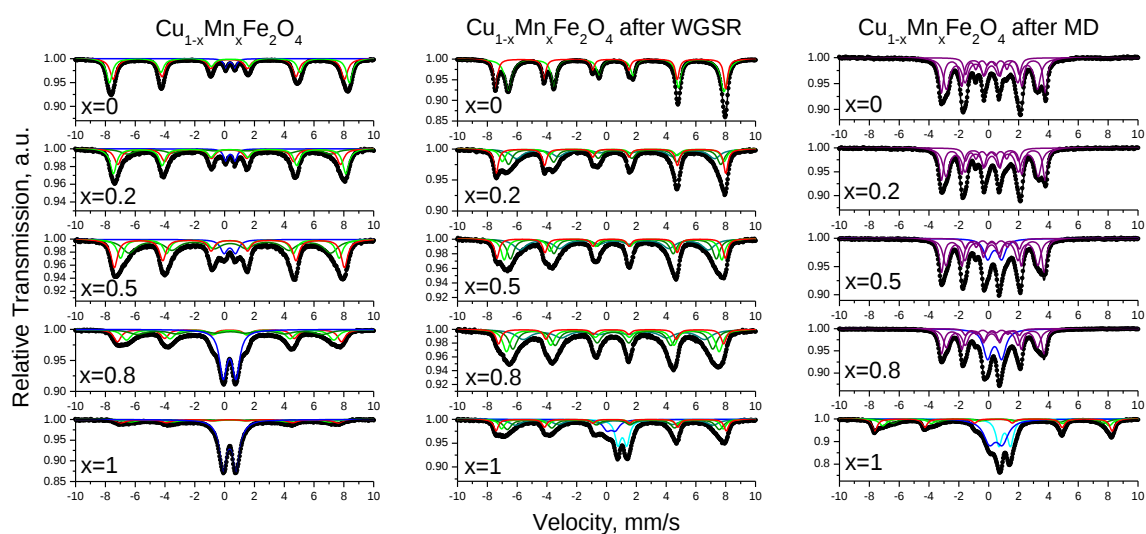
Nikolay Velinov^{1*}, Tanya Petrova¹, Izabela Genova², Ivan Ivanov¹, Tanya Tsoncheva², Vasko Idakiev¹, Boris Kunev¹ and Ivan Mitov¹

¹ Institute of Catalysis, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria

² Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria

*- corresponding author, e-mail address: nikivelinov@ic.bas.bg

Graphical abstract



Highlights

- Mössbauer spectroscopy reveals changes in cation distribution with Cu/Mn variation
- partial reduction of Fe^{3+} to Fe^{2+} of the ferrites and formation of magnetite or Mn-substituted magnetite is established after WGSR
- $\text{Cu}_{0.8}\text{Mn}_{0.2}\text{Fe}_2\text{O}_4$ exhibits highest activity and stability in WGSR

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