

Fundamentals and Best Practices in Mössbauer Spectroscopy and Applications to Inorganic and Materials Chemistry, Parts I and II

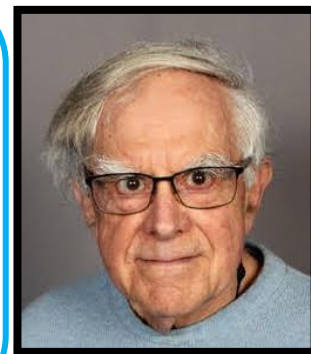


Fernande Grandjean

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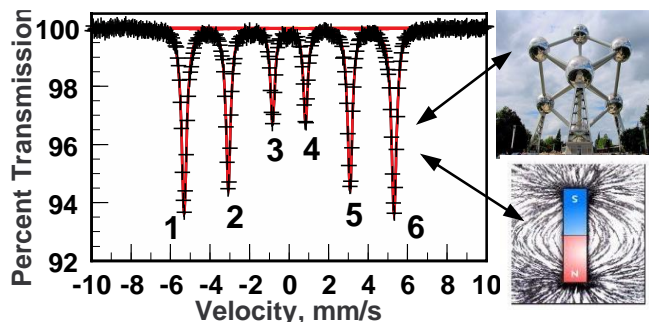
Chemistry Seminar on Best Practices in Mössbauer Spectroscopy

**Monday
Nov. 6 and
Nov. 13 at 4
pm in 303
Schrenk**

**Please contact
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for further
information.**

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Abstract: Over the past fifty years or so, the speakers have written and reviewed many papers dealing with Mössbauer spectral work and have noticed many pitfalls, omissions, and marginal to poor practices in the literature. These seminars describe the best recommended practices and protocols for measuring, analyzing, and presenting Mössbauer spectra for publication. To illustrate these recommendations, the seminars next present a discussion of the techniques that ensure the best possible Mössbauer-effect spectrometer calibration, the best methods for minimizing the spectral linewidths and thus obtaining the best possible spectral resolution, the best spectral velocity ranges to use. A variety of iron containing compounds chosen from the fields of inorganic, organic, and materials chemistry, are used to illustrate the best practices that should be used. These materials include an organoiron carbonyl complex, iron phosphate compounds, single molecule magnet compounds, and iron spin-state crossover complexes.



About the speakers: Fernande Grandjean received a B.S. and a Ph.D. in physics from the University of Liège, Belgium, in 1968 and 1973. She was a Professor of Physics at the University of Liège, Belgium, from 1983 to 2008 and she is an Adjunct Professor of Chemistry in the Department of Chemistry at Missouri University of Science and Technology. She has published 300 papers and chapters, mostly centered on Mössbauer spectroscopy, and has 13,155 citations and an *h*-index of 60.

Gary J. Long received a B.S. in Chemistry from Carnegie-Mellon University in 1964 and a Ph.D. in Chemistry from Syracuse University in 1968; he was a Professor of Chemistry for 53 years at UMR/MST and is now an Emeritus Professor of Chemistry. He has published 411 papers and 30 book chapters and has ca. 19,021 citations and an *h*-index of 71.

They have recently published a paper on the “Best Practices and Protocols in Mössbauer Spectroscopy”, that serves as the basis for the seminars.