**Macromolecular Design via the Interchange of Xanthates (MADIX) – From Fundamentals to Applications**

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The independent discovery by Rhodia together with the CNRS[1] and DuPont together with CSIRO[2] of the controlled radical polymerization technology RAFT (Reversible Addition-Fragmentation Chain Transfer)/ MADIX (MAcromoleular Design via the Interchange of Xanthates) in the late 90s represented a step change in the ability to design polymers through macromolecular engineering both for academic research and application in Industry. Over almost 2 decades Rhodia and today Solvay has worked with its academic partners to understand the fundamentals of MADIX in order to generate a powerful polymerization toolbox to bring innovation in its markets. After a brief introduction to Solvay, the lecture will describe the fundamentals of MADIX and highlight some applications of the technology.

[1] ***WO 9858974***
[2] ***WO9801478***