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

James Wilson, Solvay Research and Innovation Centre Paris

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 (MACromolecular 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