

Reaction Progress Kinetic Analysis To Study Organic Reactions: Free On-Demand Online Seminar

METTLER TOLEDO announced that the webinar - <u>Reaction Progress Kinetic Analysis</u>: A Powerful Methodology for Streamlining the Study of Complex Organic Reactions - presented by Donna Blackmond, is now available on-demand. METTLER TOLEDO is proud to offer this free online seminar that discusses how the Reaction Progress Kinetic Analysis methodology simplifies kinetic studies of organic reactions.

/EINPresswire.com/ COLUMBIA, MD - Reaction Progress Kinetic Analysis (RPKA) streamlines kinetic studies by exploiting extensive data available from accurate in situ monitoring of global reaction progress under synthetically relevant conditions, where the concentrations of two or more reactants are changing simultaneously - in fact, in the same manner that they are expected to change during practical synthesis. This contrasts with the classical kinetics approach, which uses distorted concentration ratios, typically ca. 10 equivalents, in order to examine the order in each substrate's concentration while holding the other constant.

Concentration dependences of two different substrates may be determined from fewer reaction progress experiments compared to a classical kinetic approach. Reaction Progress Kinetic Analysis methodology is made straightforward for interpretation via graphical manipulation of a mathematically determined minimum set of carefully designed experiments. One advantage of RPKA is vital kinetic information may be rapidly obtained and extracted even in earliest studies of a new reaction and helps inform the direction of both further reaction optimization and fundamental mechanistic investigation by other methods. The method requires little mathematical prowess and no specialized kinetic modeling techniques.

"Kinetics is the branch of chemistry which explains how fast chemical reactions go. Kinetics enable us to understand driving forces of a reaction, to assess the robustness of catalytic processes, and to distinguish between proposed mechanistic models", says Nilesh Shah, METTLER TOLEDO D2i Project Manager. "This presentation will explain fundamentals of Reaction Progress Kinetics Analysis for catalytic organic reactions using in situ reaction monitoring technology."

The Reaction Progress Kinetic Analysis webinar guest presenter, Donna G. Blackmond, received her Ph.D. in Chemical Engineering from Carnegie-Mellon University, and has enjoyed success in both the pharmaceutical industry and academia. As a world renowned expert in Reaction Progress Kinetic Analysis, Professor Blackmond's research focuses on blending quantitative aspects of chemical engineering with synthesis of complex organic molecules by catalytic routes.

As part of the commitment to continuing education, METTLER TOLEDO offers <u>free online</u> <u>seminars</u> in Biochemistry, Chemistry, and Chemical Engineering.

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