



Multi-Step Syntheses in Biology & Chemistry

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Message from the Guest Editor

Dear Colleagues,

Bio- and chemocatalysis are among today's key technologies that will shape not only the industrial landscape but also our daily lives in the future. This interdisciplinary field of research, which combines biology and chemistry, opens great perspectives for basic research as well as for industrial applications. A particular opportunity and, at the same time, a challenge is to combine various synthetic steps catalyzed by enzymes and/or man-made catalysts towards multi-step syntheses. Such synthetic cascades can enable novel pathways to obtain the molecules required by various components of the industrial product tree, e.g., pharmaceuticals. The combination of individual steps for a compound synthesis can proceed in a sequential fashion with intermediate isolation of the product of interest or by merging these reactions within a one-pot cascade. Such processes consisting of multiple steps might be based only on the use of enzymes or chemocatalysts or can be realized by integrating both "worlds of catalysts" within a synthetic pathway.

