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## Recent Advances in the Field of Type I Photoinitiators Based on Group 14 Elements

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Michael Haas received his Ph.D. in 2015 under the supervision of Prof. H. Stueger. From 2017–2018 he worked as a postdoctoral fellow at the Monash University in the group of Prof. C. Jones (Australia). He is currently a group leader at the Graz University of Technology in Austria. His research interests cover the aldol reaction of the heavier carbon homologues, the liquid phase deposition of silicon heterostructures and the design of new group 14 photoinitiators.

Today, the use of photoinitiators is no longer limited to the field of microelectronics and microlithography, but also applies in the medical field. Consequently, the search for new photoinitiators with improved properties are of great interest, but also an enormous challenge. Acyl metalloids (mainly germanium-based) are the state-of-the-art photoinitiators in this context. However, all synthetic strategies towards these compounds rely on classical salt metathesis reactions, where only a moderate complexity of the final products can be achieved. In this lecture we want to go one step further and introduce novel reactions towards acylgermanes and acylstannanes. Our innovative pathways enable us to obtain novel photoinitiators with target properties for a variety of different applications.