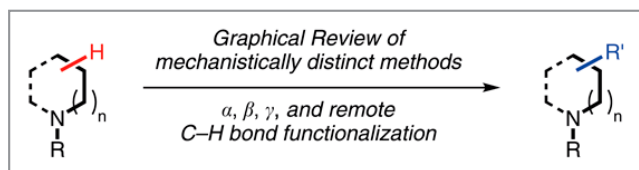


C–H Bond Functionalization of Amines: A Graphical Overview of Diverse Methods

SynOpen 2021, 5, 173–228

Functionalization of sp^3 C–H bonds in amines and their protected derivatives – such as amides, carbamates, *N*-aryl amines, etc., which have great relevance as pharmaceuticals as well as structural scaffolds in natural products, besides finding crucial applications in materials science – can be accomplished through a number of synthetic methodologies.

This vibrant area of research was reviewed in 2021 by the first Graphical Review in *SynOpen*, authored by the group of Professor Daniel Seidel (University of Florida, Gainesville, USA), which covered the most important methods in this field, together with the related underlying mechanisms, while tracing the origin of each approach back to the original seminal report or literature precedent.



Scheme 1 Graphical abstract of the first *SynOpen* Graphical Review

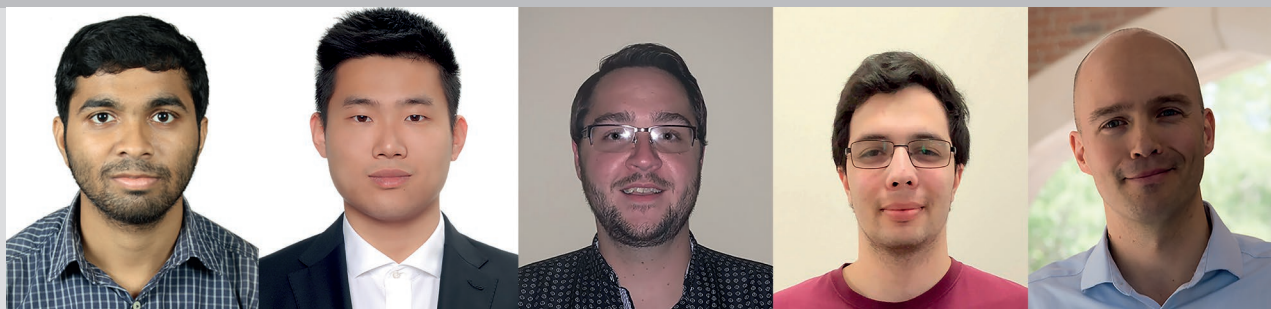
Co-author Dillon Rickertsen, graduate student in the Seidel group, said: “Writing a Graphical Review presented itself with some initial challenges. One of these challenges was how we would depict the information. The images in the Graphical Review literally needed to be worth a thousand words. Having the artistic freedom to develop a format allowed us

to explore several different layouts for each page. This was a great learning opportunity on how to present information in a very concise organized manner. It also presented challenges in deciding what papers in the review got drawn as reaction schemes and what papers were included in further reading. There were three big things that we wanted to make sure were captured in each Figure: seminal work, reaction mechanism, and impactful contributions to the field. I feel the finalized format that was used for the Graphical Review highlights these three factors well. Overall, I thought this was a good experience and feel that Graphical Reviews are a quick and efficient way to access information regarding a topic. I hope to see more Graphical Reviews on various topics soon.”

First author Subhadeep Dutta, also a graduate student in the Seidel group, said: “It was a unique learning experience while working on the Graphical Review which is the first of its kind (as introduced by *SynOpen*). What’s interesting is it incorporates all the qualities of a typical scientific review article and encapsulates it in a way that is visually appealing, engrossing, and lucid. It would give the readers a good insight of what has been done in a particular field of research and what is yet to be accomplished. I appreciate the efforts made by the Graphical Review team who made sure to maintain a good quality and high standard for the document. I hope this Graphical Review will encourage the scientific community to contribute to more reviews of this kind in the future. Happy to be a part of this great opportunity.”

Subhadeep Dutta

About the authors



From left to right: S. Dutta, B. Li, D. R. L. Rickertsen, D. A. Valles, Prof. D. Seidel