## Synthetic utility of phenylsulfonyl allenes

Shaun Murphree, Allegheny College, Meadville, Pennsylvania, USA

$$\begin{array}{c} R \\ SO_2Ph \end{array} \xrightarrow{[2+2]} \begin{array}{c} R^1 \\ SO_2Ph \end{array} \xrightarrow{R^1, R^2 = H} \begin{array}{c} Br \\ SO_2Ph \end{array} \xrightarrow{R} \begin{array}{c} R \\ SO_2Ph \end{array}$$

Sulfones constitute a broad class of compounds that exhibit synthetically useful physicochemical properties. In particular, phenylsulfonyl allenes represent compact, highly flexible synthetic intermediates that engage in a variety of fundamental processes, including cycloadditions and nucleophilic & electrophilic capture. Strategies for leveraging this chemistry to access cyclopentenones, furan derivatives, and annelated cylobutanes are discussed.



## **Shaun Murphree**

Shaun Murphree is Professor of Chemistry & Biochemistry at Allegheny College (Pennsylvania, USA). He received his Ph.D. in Organic Chemistry at Emory University (Georgia, USA) under the direction of Professor Albert Padwa, and did post-doctoral studies in the laboratory of Professor Peter Jacobi at Wesleyan University (Connecticut, USA). He then spent seven years at Bayer Corporation before starting his academic career at Allegheny College. His research interests center about the synthetic applications of vinyl and allenic sulfones.

Shaun is visiting Adam Mickiewicz University for six months working in the group of Professor Sikorski under the auspices of the Fulbright Program.