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Flow Photoreactor for Cyclization Reactions.

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2016

Dostupný z <http://www.nusl.cz/ntk/nusl-253589>

Dílo je chráněno podle autorského zákona č. 121/2000 Sb.

Tento dokument byl stažen z Národního úložiště šedé literatury (NUŠL).

Datum stažení: 19.04.2024

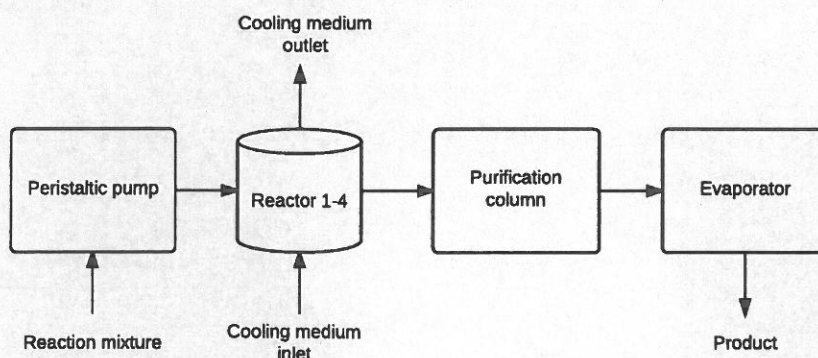
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Flow Photoreactor for Cyclization Reactions

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[n]Helicenes and [n]phenacenes have attracted a considerable attention due to their unique electronic and optical properties. Applications in various fields of applied research require a steady supply of material in a sufficient quantity at reasonable price. Their preparation is generally easy to scale up to multigram, or even tens-of-gram scale. A weak point of scaling up is the photoreaction, which is dependent on concentration and irradiation intensity.

In the quest of our investigation in this field, we have assembled a fully functional flow reactor based on a working prototype. The accessible amount of [n]helicenes and [n]phenacenes prepared has increased several times. This was achieved not only due to a larger irradiated volume over the prototype, but also thanks to an advanced purification method, which facilitates the reaction mixture work-up and yields material ready for final crystallization without a further intervention.



Reactor setup scheme