

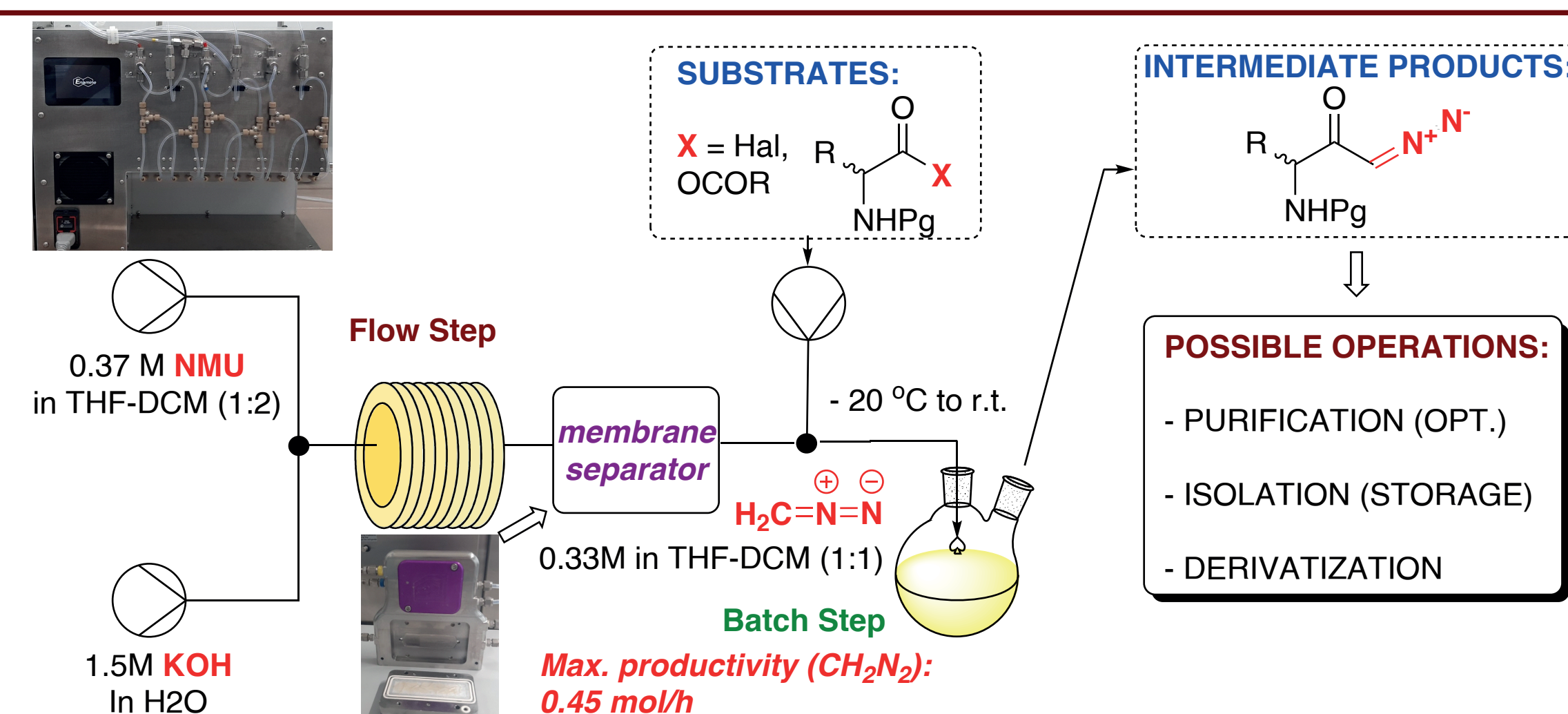
Divergent Approach to Diazoketones Photochemistry

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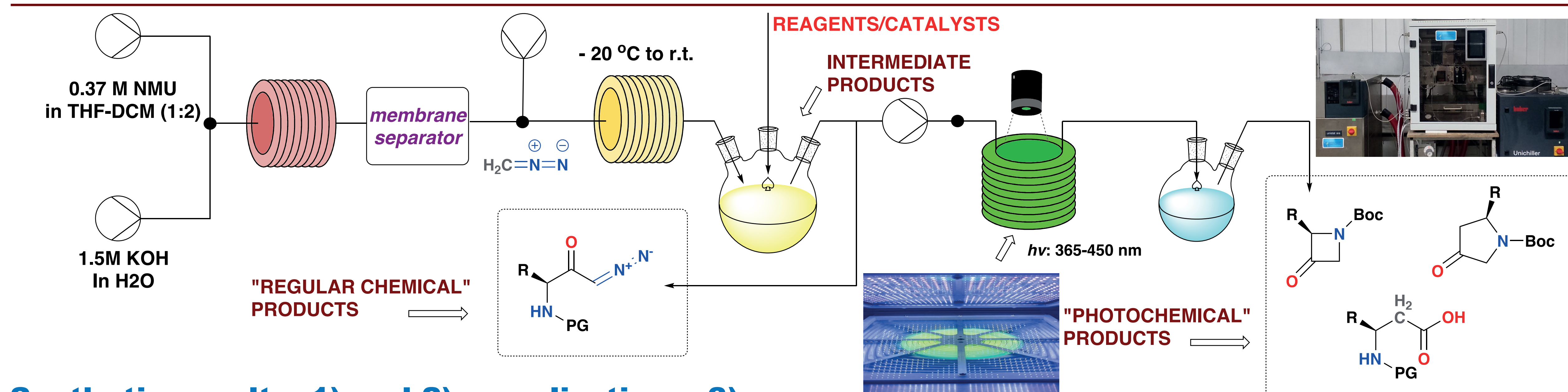
Background of the project

Dry Diazomethane in Flow: Safety, Scale, Broad Application

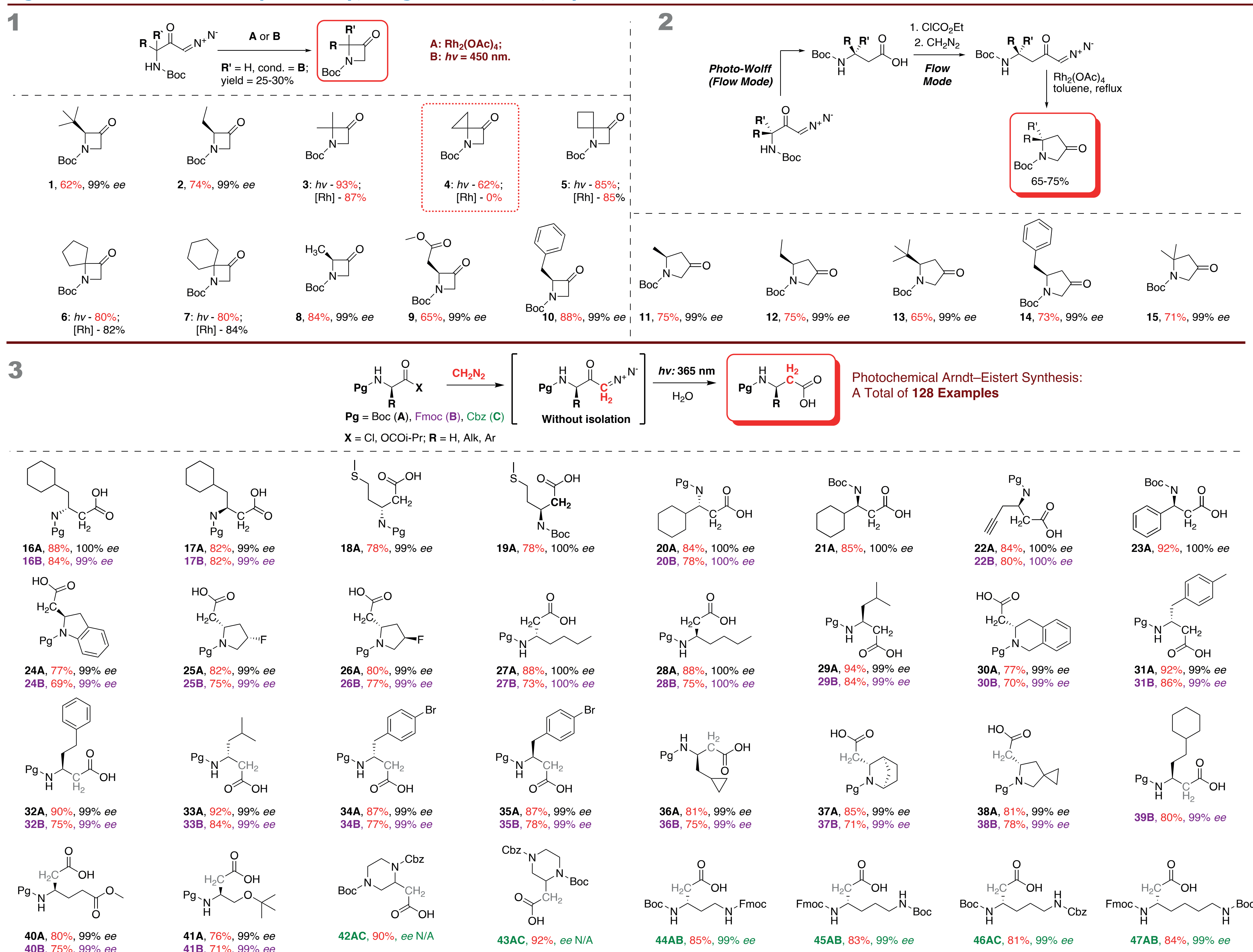
- **A flow system for generating diazomethane** enables the synthesis of MedChem building blocks and intermediates with productivity up to 0.45 mol/h, **scalable to hundreds of grams per operation**.
- **Diazoketones**, synthesized using this system, are **valuable, bench-stable reagents**¹ on their own, and can be used for **various photochemical transformations**.
- The use of flow photoreactor enables the synthesis of **β -amino acids**³, **azetidinones** and **piperidinones**, with the **preservation of chirality** of the starting acids for diazoketones and their derivatives.



Flow-Generated Diazomethane in Reaction Cascade: Setup and Scope of the Products



Synthetic results: 1) and 2), - cyclizations; 3)



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References

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2. Pendiukh V. V. et al. ChemRxiv 2024, DOI: 10.26434/chemrxiv-2024-r2knw;
3. Pendiukh V. V. et al. ChemRxiv 2024, DOI: 10.26434/chemrxiv-2024-fqdl6;