



8th ICGC 2018 Session: Non-thermal Activation Method

Microwave-assisted syntheses of bioactive oxygen heterocycles and alkaloids

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Abstract:

In this presentation, the development and optimization of microwave-assisted syntheses of bioactive compounds will be demonstrated. A direct synthetic entry to 3-amidocoumarins based on the Cu(I)-mediated and microwave-assisted C-O bond formation in a one-pot procedure is shown. The microwave-assisted C-O/C-N bond formation of lactone and lactam derivatives will also be presented. This is strikingly different selectivity in the C-O/C-N bond formation from ordinal heating condition. The reaction using base-mediated cascade cyclisation under aqueous conditions also known complied with concept of the “green chemistry”. The value of this work lies in the efficient formation of the oxazabicyclo[3.3.1]nonane skeleton whereby all the C-C, C-N and C-O bond formations occurred in a single chemical operation.

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