
EDITORIAL



Modern trends in chemistry, especially synthetic organic chemistry, are concerned with efficient reactions. The main focus is on selective reactions and the avoidance of the use of environmentally critical solvents or reagents, with the aim to reduce waste. A further aspect is energy transport into a reaction system. During the last two decades it could be clearly demonstrated that reactions under microwave irradiation are faster. This is based on the efficient energy transfer directly into the reaction medium. Microwave irradiation is one of the so-called non-classical methods. Other examples for non-classical

or non-traditional methods are reactions under ultrasound irradiation or plasma chemistry. Microwave irradiation in combination with other techniques, e.g. solvent-free procedures, minimize waste and pollution and agree with the concepts of 'Green Chemistry'.

This issue of CHIMIA summarizes current trends in the field of chemistry under microwave irradiation. Aspects of synthetic organic chemistry are also presented that combine microwave, ultrasound and ionic liquids (for ultrasound applications see CHIMIA 54, 2000) and microwave-assisted extractions. Several aspects of processing under microwave irradiation are critically discussed. The issue focuses on the application of microwaves. People not familiar in this field are informed about modern trends and research activities.

In conclusion, this issue reports examples of energy modes that highlight new strategies. The editor hopes that it is a help to organic chemists and will motivate them to use microwave irradiation.

Furthermore I heartily thank the colleagues who accepted the invitation to contribute to the present issue.

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