



Journal of Chemistry

Special Issue on  
**Green Protocols in Heterocyclic Synthesis**

# CALL FOR PAPERS

Heterocyclic compounds were present in many pharmaceutical products that mimic the biological activity of natural products. Access to these complex structures became available through a variety of novel methods and the strategic deployment of known methods. Because of the current trend in environmental protection, which has resulted in more restrictive environmental regulations, as well as the high costs of waste treatment, removal, and remediation, the exploration for the synthesis of pharmacophores has reached a new phase in research.

The need for environmentally benign reactions is very important in view of today's ecofriendly conscious attitude. "Benign by Design" represents the 12 principles of Green Chemistry as articulated by John Warner and Paul Anastas (*Green Chemistry: Theory and Practice*, Oxford University Press, New York, 1998, p. 30). These principles have given chemists a framework for the evaluation of the chemical procedures and help chemists to develop synthetic procedures which are more efficient, create less waste, and use and produce less toxic substances.

The chemistry of living organisms depends on its combination of unusual properties, and it is difficult to imagine life in the absence of the aqueous medium. Now a day's water is used in almost all of the most useful organic reactions, even reactions involving water sensitive compounds. In many cases, due to hydrophobic effects, using water as a solvent not only accelerates reaction rates but also enhances reaction selectivity, even when the reactants are sparingly soluble or insoluble in this medium.

Microwave energy has become a popular tool used in the synthesis of a variety of heterocyclic systems for a variety of reasons. Microwave energy offers tremendous advantages relative to traditional heating, such as cleaner chemistry, reductions in reaction times, improved yields efficiency, product quality, and safety, as well as tremendous scope for automation.

We invite review articles and original papers describing current and expected challenges along with potential solutions for heterocyclic synthesis using green technology.

Potential topics include, but are not limited to:

- ▶ Use of water as reaction medium
- ▶ Reaction without any solvent or neat condition
- ▶ Replacing stoichiometric amounts of metal reagents with catalytic amount
- ▶ Use of microwave instead of conventional heating
- ▶ Application of ionic liquid
- ▶ Employing biosynthetic processes

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jchem/organic.chemistry/gphs/>.

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