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Research area

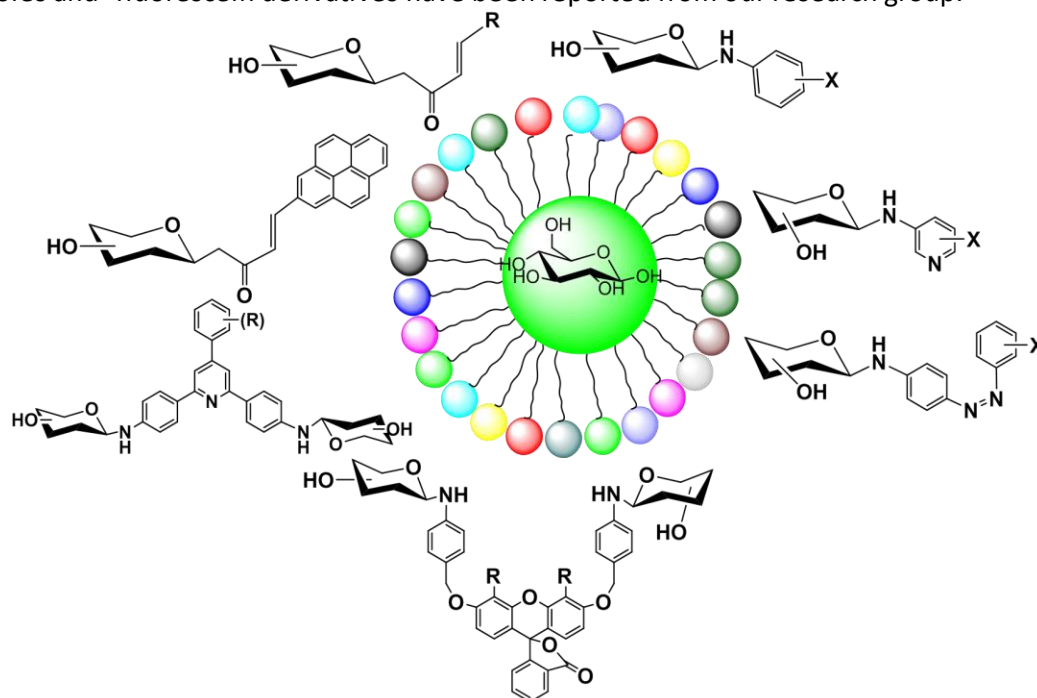
Material chemistry, Sugar Chemistry, Synthetic Organic Chemistry

Main objectives of our research group is as follows

- Development of novel synthetic methods
- Synthesis of sugar based gelator molecules and glycol-hybrids.

Synthetic methodologies such as, cycloaddition reactions, Multi-Component Reaction (MCR), Aldol condensation, Michael addition and glycosylation strategy have been developed for the synthesis of glyco-hybrids and sugar based gelator molecules.

Design, synthesis and characterisation of sugar incorporated aromatic heterocyclics as stimuli responsive Low Molecular Weight Gelators (LMWGs) is the major interest of our current research. Recently, synthesis and evaluation of their biological and material applications of sugar based-inden-1-ol/indenones, - β -lactams, -spiro compounds, -pyrazoles, -quinolines, -coumarins, -triazoles and -fluorescein derivatives have been reported from our research group.



Sugar based compound library

Selected Publications from my research group

- RSC. Adv.*, **2015**, 5, 64604-64613. (Impact Factor: 3.8).
- Org. Lett.*, **2012**, 14(3), 748-751 (Impact Factor: 6.3).
- Org. Biomol. Chem.*, **2012**, 10, 2077-2083 (Impact Factor: 3.5).
- J. Mater. Chem.*, **2009**, 19, 4587-4596. (Impact Factor: 6.6).
- New J. Chem.*, **2009**, 33, 2391-2396. (Impact Factor: 3.1). (Top ten article)
- Indian Pat. Appl.* (2009), CODEN: INXXBQ IN 2008CH02831 A 20090130