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| Title:                  | Effect of intramolecular H-bonding and $\pi$ stacking on the folding of periodically grafted amphiphilic polyamides   |
| Authors:                | Reena   |
| Keywords:               | H-bonding<br>$\pi$ stacking<br>Amphiphilic polyamides   |
| Issue Date:             | 28-Jul-2021   |
| Publisher:              | IISERM  |
| Abstract:               | The study of natural biological systems where covalent and non-covalent molecular interactions between unique units in their sequence aid folding into a well-defined three-dimensional structure inspired the field of foldamer chemistry. In this work, two different aromatic oligoamide foldamers were synthesized and characterized by $^1\text{H}$ NMR, UV-Visible spectroscopy. The plan was to synthesize $\pi$ -electron rich foldamers in which conformational preferences can be induced through different covalent and non-covalent interactions (for example, hydrogen bonding). The target polymer POLY 11 consists of donor group 1, 5-diaminonaphthalene, and monomer hydroxyl substituted chelidamic acid, i.e., a potential candidate to facilitate intramolecular hydrogen bonding; predicted that this would induce a random coil structure into a well-organized foldameric system. All of the backbone's structural features are designed to aid in the folding process. The primary outcome of work is after post-polymerization modification that helps in solubility of the polymer in different organic solvents. Conclusions regarding stable folded conformations along the polymer chain were inferred from NMR and UV-Vis spectroscopy. |
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