

## Responsive hydrogelators derived from open chain-pseudopeptidic compounds.

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**Topic:** Beyond the Elements: building Nano- and Bio-materials

### Abstract:

The design and synthesis of bioinspired low molecular weight gelators structured at the nanoscale is a topic of current interest in supramolecular chemistry due to their broad reported applications.<sup>1,2,3</sup> The dynamic and reversible nature of supramolecular interactions, can provide supramolecular gels with abilities such as external stimuli-responsiveness and selfhealing, making them exceptional candidates for adaptive materials in controlled release, molecular sensing and biomedical applications.<sup>4</sup> Moreover, gelators based on natural amino acids, derivatives and peptides present relevant properties in the development of intelligent bio-materials.<sup>5,6,7</sup>

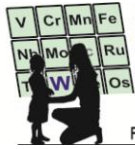
In this context, a new family of open chain-pseudopeptidic compounds, with the general structure shown in Figure 1, have been prepared with excellent yields and having good hydrogelation properties. Moreover, their capacity to form hydrogels controlled by different external stimuli and the influence of the amino acid side chain, in their gelling properties has been studied.

**Figure 1:** General structure of C<sub>2</sub> open chain pseudopeptides

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