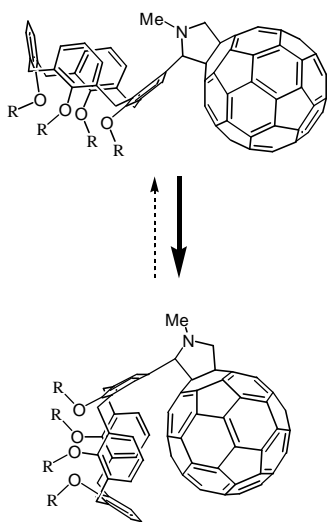


# Towards Fullerene-containing Molecular Machines

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The synthesis and the conformational analysis of a calix[4]arene derivative bearing a fulleropyrrolidine group on the upper-rim (compound **1**, R = C<sub>4</sub>H<sub>9</sub>) will be presented.



The fulleropyrrolidine group in **1** is rotating freely at high temperature but only the self-complexed conformer is observed at low temperature.<sup>1</sup> Compound **1** can be seen as a covalent assembly of two components able to perform mechanical-like movements of relatively large amplitudes (rotation of the fulleropyrrolidine group) as a consequence of an external stimulus (temperature). Therefore, calix[4]arene-fullerene conjugate **1** presents characteristic features that makes it an interesting building block for the preparation of new molecular machines.<sup>2</sup>

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## References

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