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PROCEEDINGS

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Supramolecular Capsules Based on Metal Coordination or Hydrogen Bonding from Enantiopure Benzocyclotrrimers

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Syn-benzocyclotrimers are C₃-symmetric compounds characterized by a cup-shaped structure, which are well suited scaffolds for the building of supramolecular hosts. We have previously described the preparation of capsules and cages from condensation of benzotricamphor 1 with hydroxylamine¹ and aliphatic diamines,² which are able to host gases (argon, nitrogen, oxygen and C1-C2 hydrocarbons). Herein we report further functionalizations of (+)-benzotricamphor by the introduction of different functional groups at the rim of the bornene skeleton and the study of self-assembling properties of derivatives 2. Terminal pyridine allowed the preparation of coordination cages 3 with transition metals. The dimeric capsule 4 held together by an extended H-bond network was observed when trimers bearing uracil-derivative and bis(acetamido)pyridine were mixed together.