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Cylinder to sphere transition in reverse microemulsions: The effect of hydro-tropes

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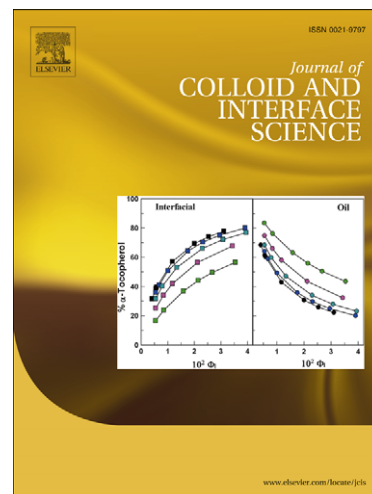
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1 **Cylinder to sphere transition in reverse microemulsions: The effect**
2 **of hydrotropes**

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15 **Abstract**

16 The effect of hydrotropes on the geometry of reverse water-in-oil AOT-
17 microemulsions is investigated as a function of water content, and hydrotrope
18 additive architecture. SANS reveals that hydrotropes induce cylindrical morphologies
19 which transition to ellipsoidal and then spherical geometries with increasing water
20 content (w). The length of the elongated particles appeared to show some
21 dependence on the hydrotrope-AOT tail compatibility, which is also reflected in the
22 phase behaviour of these systems. This is the first report of hydrotrope-induced axial
23 elongation of water microemulsions in the oil phase.

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