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Two thermotropic bicontinuous cubic ...

... liquid-crystalline phases containing three or two networks were discovered. The triple-network phase displays a previously undiscovered feature: it is always strongly optically active even though the constitutive compound is achiral. In contrast, the "double gyroid", containing only two networks, has no optical activity. As X. Zeng, G. Ungar, C. Tschierske et al. propose in their Communication on page 13115 ff., only in the double gyroid the opposing induced chiralities cancel out, while in the triple-network net chirality inevitably persists.

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