Title:	Three-Ring-Based Room-Temperature Bent-Core Nematic Compounds: Synthesis and Characterization
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Abstract:	We report the synthesis and characterization of a new class of achiral three-ring bent-core compounds with an amide and ester linkage at the molecular bend, which are shown to exhibit nematic/phases in wide temperature ranges around room temperature (RT) and undulated SmC phases below RT. In contrast to previous studies, the compounds reported in this Communication show a true RT nematic phase with fluid physical appearance. They show strong photoluminescence in the mesophase and are found to display a one-dimensional array of intermolecular hydrogen bonding. Furthermore, the nematic phases exhibited by these compounds show a good homeotropic alignment that can be exploited in applications such as optics and sensing. Considering the scarcity of bent-core materials exhibiting an RT nematic mesophase, this new class of materials is promising. Promising trios: A family of three-ring-based room-temperature bent-core nematic compounds with potential applications in optics and sensing is presented.
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