A chiral epoxidation catalyst based on a tricyclic octahydro-1H-4,7-methanooindol-1-one scaffold, in which a hydrogen bonding site and the catalytically active ruthenium center are spatially separated, was synthesized. It was shown that epoxidation reactions in such a supramolecular catalyst occur with high enantio- and regioselectivity because the hydrogen bonds expose the substrate to the ruthenium porphyrin complex with a clear conformational preference. The epoxidation of 3-vinylquinolone proceeded in up to 95% yield.