Small Functional Rotaxanes

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Our group have pioneered the use of "small" macrocycles[1] in active template reactions in order to allow the synthesis of small(er), functionalised rotaxanes in excellent yield (**Fig 1**).[2] I will describe some of our recent applications of this methodology to the synthesis of complex homo- and hetero-circuit [n]rotaxanes,[3] as well as functional interlocked molecules including sensors and catalysts,[4] and discuss our pioneering work on mechanically chiral rotaxanes, a previously hard to access class of chiral molecules.[5]

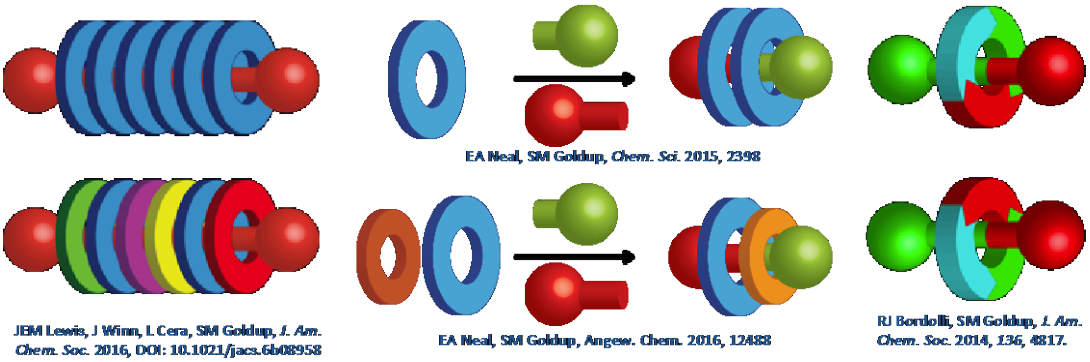


Fig 1. Complex Interlocked Molecules Synthesised with the AT-CuAAC Reaction

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