



# Corrigendum: Rigidity and Flexibility in Rotaxanes and Their Relatives; On Being Stubborn and Easy-Going

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**Keywords:** conformations, flexible, host-guest chemistry, macrocycle, polyrotaxane, pseudorotaxane, rigid, rotaxane

## A Corrigendum on

**Rigidity and Flexibility in Rotaxanes and Their Relatives; On Being Stubborn and Easy-Going** by Fadler RE and Flood AH (2022). *Front. Chem.* 10:856173. doi: 10.3389/fchem.2022.856173

In the original article, there were mistakes in some of the figures as published. The corrected figures are below.

In **Figure 1F**, the cyclodextrin was missing from the repeating unit.

In **Figures 5D,E**, the organic substituents on the lower porphyrin ring were incorrect.

In **Figure 6**, the chelating units on the thread consisted of a 4,7-phenanthroline and two pyridines rather than two 2,2'-bipyridines. In addition, the zinc coordinates to triazole in **Figure 6B** on both the top and bottom thread, not a pyridine nitrogen. Ar labels were also provided.

In **Figure 13A**, the methyl groups on the exterior pyridines were in the wrong position. The number of methylene carbons was fixed.

In **Figure 14D**, the  $+2e^-$  and  $-2e^-$  were going in the wrong direction. The oxidized tetrathiafulvalene structure had a bridging double bond instead of a single bond.

The H<sub>2</sub>O and DMSO solvent labels were flipped in **Figures 15C,D**.

In the original article there was an error in the section **Translating Molecular Designs Into Bulk Materials**, page 18, last paragraph. The correct description of **Figure 4** is as follows:

“Ke showed that DMSO causes the 3D printed object to smear (**Figure 4D**→**Figure 4B**), and water recovers the original shape (**Figure 4B**→**Figure 4D**).”

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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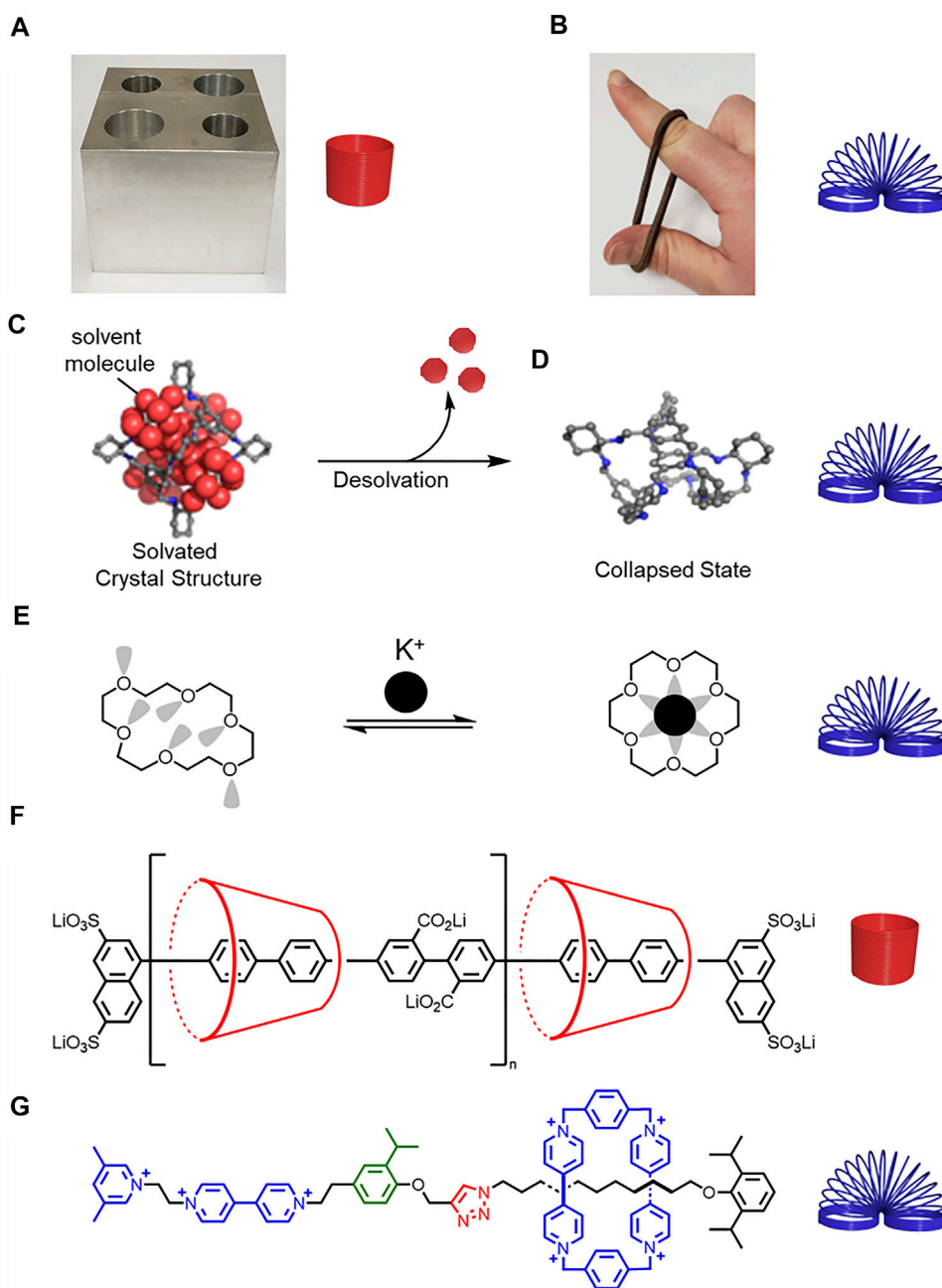
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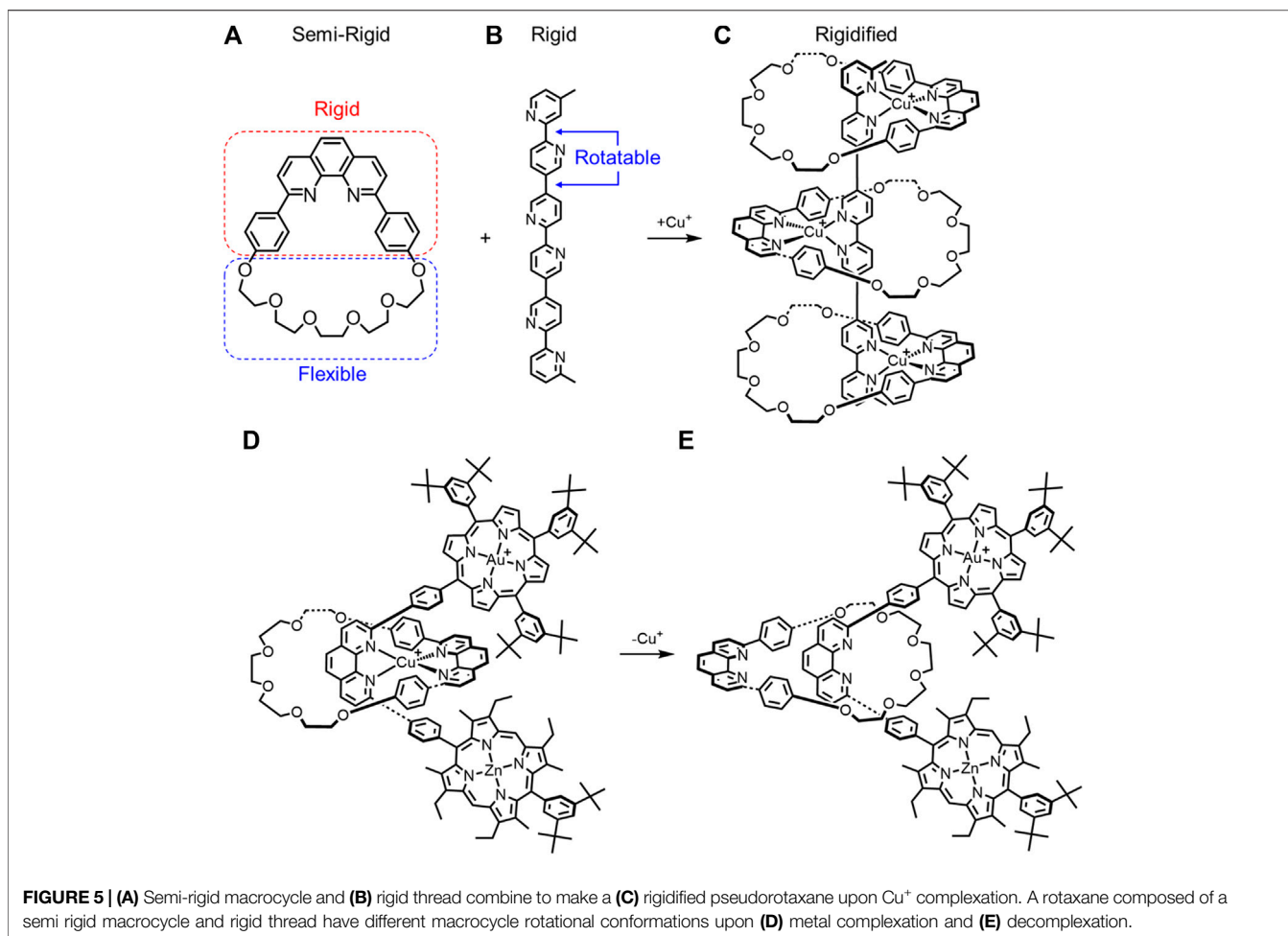
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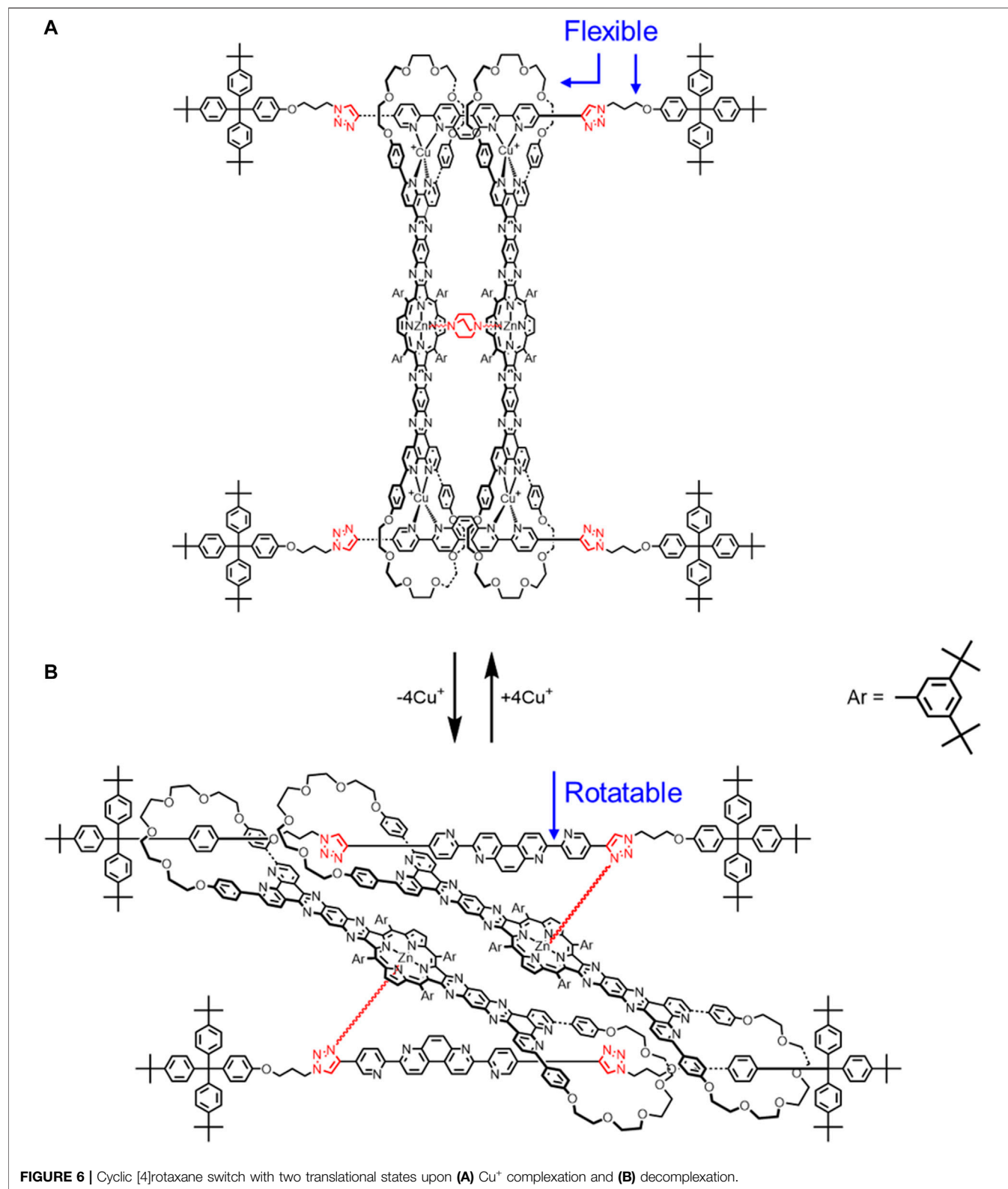
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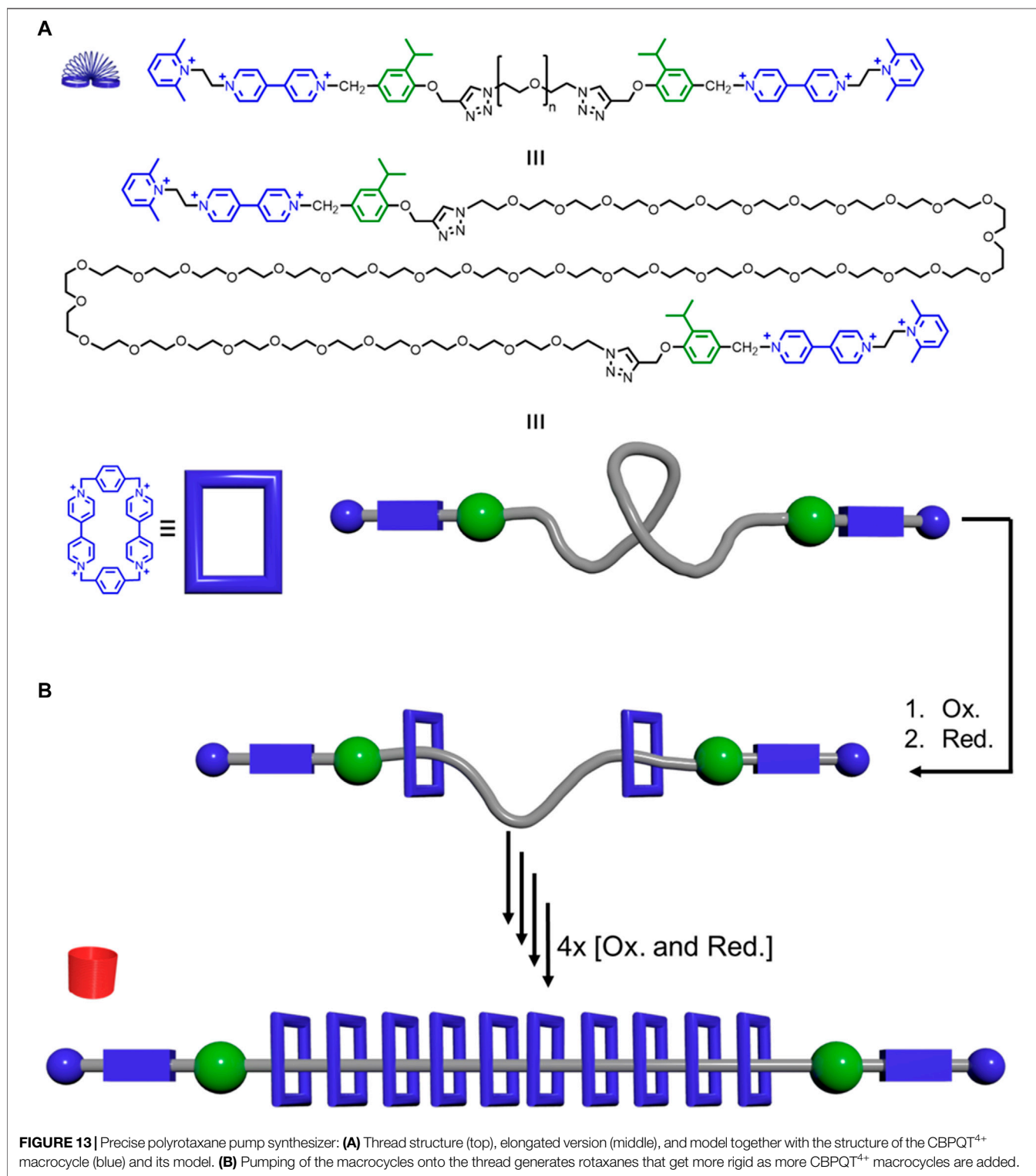
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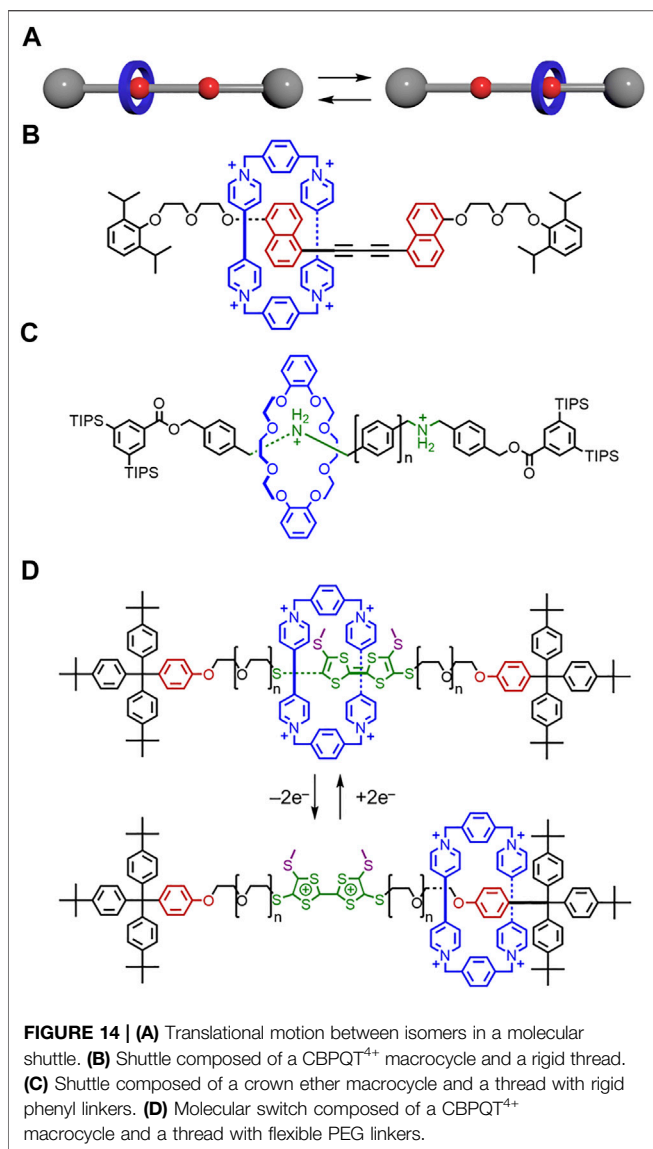


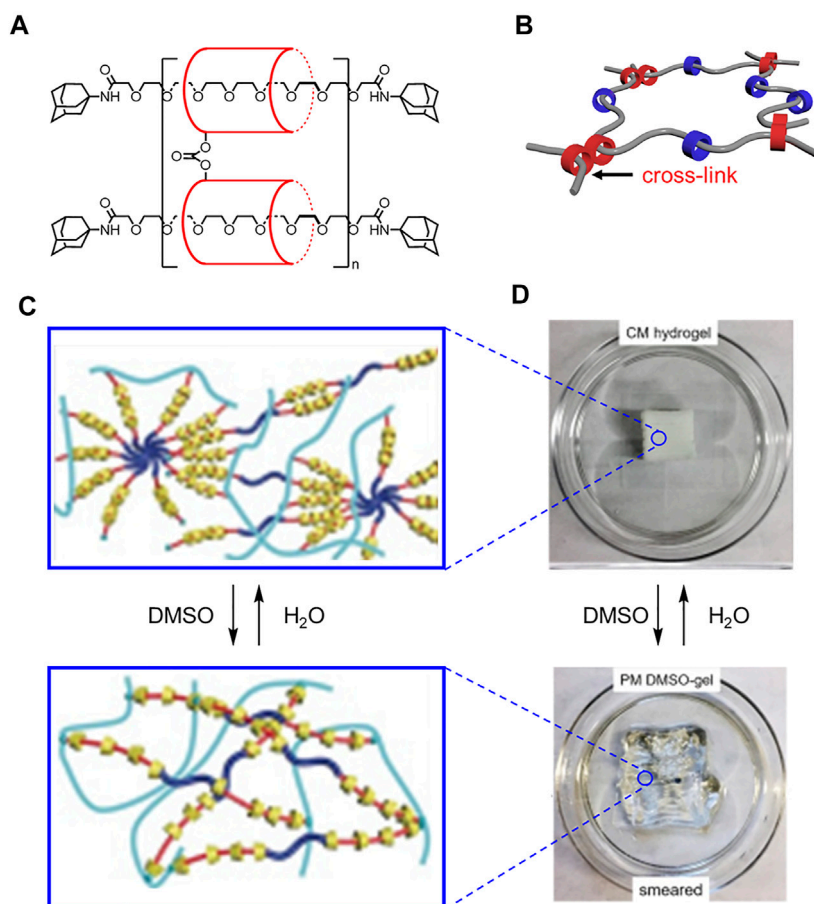
**FIGURE 1 | (A)** Hard metal block and rigid spring. **(B)** Soft rubber band and flexible spring. **(C)** Schematic representation of a solvated molecular cage **(D)** collapsing upon desolvation. Adapted with permission from Ref. (Liu et al., 2014). Copyright 2014 American Chemical Society. **(E)** Structure of a collapsed crown ether that changes shape and rigidifies upon potassium complexation. **(F)** A more rigid polyrotaxane composed of cyclodextrin and a conjugated thread, and **(G)** a less rigid rotaxane composed of cyclobis(paraquat-p-phenylene) (CBPQT<sup>4+</sup>) and a thread composed of flexible alkyl chains and rigid aryl building blocks.











**FIGURE 15 | (A)** Structure and **(B)** model of slide ring materials with cross-linked cyclodextrins (red) and free cyclodextrins (blue). **(C)** Molecular cartoons and **(D)** 3D printed materials under different solvent conditions. Adapted with permission from Ref. (Lin et al., 2017). Copyright 2017 John Wiley and Sons.