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**Erica Flapan** and **Emille Davie Lawrence\*** (edlawrence@usfca.edu). *Topological Symmetry Groups of Möbius Ladders.*

Chemists have been trying for decades to synthesize molecules with topologically interesting structures. This served as motivation for the study of symmetries of graphs embedded in  $S^3$ . Furthermore, the questions arising from chemists have led to answers that are topologically fascinating in their own right. We will define the topological symmetry group of a graph embedded in  $S^3$ , and discuss recent work on exactly what groups are realizable as topological symmetry groups for a certain class of graphs known as Möbius ladders. (Received August 30, 2015)