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Structural Manipulation of Single Metalloporphyrin Molecules on Cu(111) by Scanning Tunneling Microscope Tip SE-JONG KAHNG, HOWON KIM, WON-JUN JANG, Korea University — We report our manipulation experiments of Co-porphyrin molecules performed on Cu(111) using a scanning tunneling microscope, which produced structures that cannot be obtained in as-adsorbed samples. Starting from two as-adsorbed conformations, we observed several intermediate structures followed by a four-lobed final product. The manipulations were performed using two different methods which resulted in similar final structures. Possible molecular conformations and mechanisms for the manipulation processes are discussed.

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