

Abstract Submitted  
for the MAR12 Meeting of  
The American Physical Society

**Contesting the paradigm of chirality** EFI EFRATI, University of Chicago — In 1893 Lord Kelvin coined the term chirality, and stated what is to become the elementary paradigm of chirality: 'I call any geometrical figure, or any group of points, chiral, and say it has chirality, if its image in a plane mirror, ideally realized cannot be brought to coincide with itself'. While the notion of chirality has greatly advanced our understanding of the structures of molecules and crystals, it has been shown to be inconsistent with every pseudo-scalar quantification. In this talk I will present a tabletop demonstration of a chiral structure which is constructed through the achiral summation of identical elementary units which are symmetric under reflection. The seeming contradiction to the definition of chirality is reconciled by proposing an alternative definition, relying on the physicist interpretation of the right hand rule.

Efi Efrati  
University of Chicago

Date submitted: 29 Nov 2011

Electronic form version 1.4