

SYMMETRY IN PERIODIC AND IN QUASI-PERIODIC CRYSTALS

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The 1984 discovery of crystalline solids which have icosahedral symmetry surprised the communities of crystallographers and physicists. The combination of sharp peaks in the diffraction patterns, taken from these solids, with the five-fold rotational axes in the patterns was considered "impossible" in classical crystallography.

In an effort to understand the uniqueness and the importance of quasi periodic symmetry to broadening our view of the structure of crystalline materials we shall deal with some aspects of real and reciprocal space and demonstrate experiments that enabled the discovery.