



Symmetry and Asymmetry in Quasicrystals or Amorphous Materials

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Message from the Guest Editor

Dear Colleagues,

Quasicrystals (QCs) are long-range ordered materials with a symmetry incompatible with translation invariance. Accordingly, QCs exhibit high-quality diffraction patterns containing a collection of discrete Bragg reflections. Notwithstanding this, it is still common to read in the recent literature that these materials occupy an intermediate position between amorphous materials and periodic crystals. This misleading terminology can be understood as probably arising from the use of models and notions borrowed from the amorphous solids conceptual framework (such as tunneling states, weak interference effects, variable range hopping, or spin glass) in order to explain certain physical properties observed in QCs. On the other hand, the absence of a general, full-fledged theory of quasiperiodic systems certainly makes it difficult to clearly distinguish the features related to short-range order atomic arrangements from those stemming from long-range order correlations...





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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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