

QC5 **Soft Quasicrystals** Ron Lifshitz, *Raymond & Beverly Sackler School of Physics & Astronomy, Tel Aviv University, Tel Aviv 69978, Israel.*
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There is growing interest in recent years in the ability to grow quasicrystals and other complex structures, whose building blocks are on a mesoscopic scale of tens to thousands of nanometers. These range from artificially constructed metamaterials, such as photonic quasicrystals, to self-assembled soft-matter quasicrystals [1-3]. In addition to having promising applications, especially in the optical domain, these materials give us the opportunity to study quasicrystals in ways that were impossible before. As time permits, I will discuss a few aspects of our ongoing work on these systems, ranging from our recent explanation of the stability of certain quasicrystals composed of soft isotropic particles [4,5], to the design of nonlinear photonic quasicrystals for optical frequency conversion [6].

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