# Partially auxetic behavior in Degenerate Crystalline phase of soft dimers with size polydispersity

J.W. Narojczyk,[1] K.W. Wojciechowski,[1] and M. Kowalik[1]

[1] *Institute of Molecular Physics, Polish Academy of Sciences, M. Smoluchowskiego 17/19, 60-179 Poznań, Poland*

In the *aperiodic phase* of dimers, known also as the Degenerate Crystal [1], it was found that for a particular model of polydisperse dimers [2], the Poisson's ratio [3] in the direction [110] $\left[1\bar{1}0\right]$ decreases, down to negative values, with increasing polydispersity in the system. This is in contrast to observations in other directions, where an increase of the size polydispersity causes an increase of the Poisson's ratio. This indicates that the system is *partially auxetic* [4]. Studies of a broader class of polydisperse dimer models, that are easy to make in practice, have been undertaken. The obtained results confirm partial auxeticity of the models [5].

**References:**

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