

Abstract Submitted
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Effect of a perturbation on the structure pattern of a two-dimensional foam¹ CAROLINA MENDOZA, Instituto de Fisica, Pontificia Universidad Catolica de Valparaiso, Av. Brasil 2950, Valparaiso 02, Chile , MANUEL ORTÍZ, Departamento de Matematicas y Fisica Universidad de Playa Ancha, Av. L. Carvallo 270, Valparaiso 01, Chile, CARLOS WÖRNER, JAVIER MARTÍNEZ-MARDONES, Instituto de Fisica, Pontificia Universidad Catolica de Valparaiso, Av. Brasil 2950, Valparaiso 02, Chile — Size of bubbles in foams, grain size in polycrystalline materials and cells in biological tissues strongly determine their macroscopic properties. The pattern architecture of these systems seems to follow similar laws, i.e. the time scaling of mean domain size [1]. In this work, we will report the experimental behavior of a 2-D foam structure under an external periodical and locally situated driving force [2]. Under such a perturbation, the cell pattern consists of two “rings” of small cells separated by a zone of cells of greater size. Possible applications of this effect in domain size control are discussed.

[1] C.H. Wörner and A. Olguín, Mater. Sci. Forum, 467 1003 (2004).

[2] C. Mendoza, J. Bragard, P.L. Ramazza, J. Martínez- Mardones and S. Boccaletti, MBE 4 N3 (2007).

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