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Roughening evolution of the interfaces in two-component surface growth with an admixture of random deposition ALICE KOLAKOWSKA, MARK NOVOTNY, POONAM VERMA, Dept. of Physics and Astronomy, Mississippi State University, MS 39762-5167 — We study universal properties of competitive two-component growth models on a one dimensional substrate of L sites. One component is random deposition (RD). The other component generates correlations among lattice sites. We derive the universal scaling function of the interface width for the models where these correlations are either of the Kardar-Parisi-Zhang type [1] or of the Edwards-Wilkinson type, and show that the RD admixture acts as a dilatation mechanism to fundamental time and height scales. The RD blending does not change the universality class of the interface since it does not change the dynamics of mechanisms that are responsible for building correlations. However, such dilatation, when combined with an initial flat- substrate condition, may obscure a clear observation of the universal scaling in experiments. This research has been supported by the NSF grants DMR-0113049 and DMR-0120310, and used resources of the NERSC Center, which is supported by the Office of Science of the US DoE under contract No. DE-AC03-76SF00098.

[1] A. Kolakowska, M. A. Novotny, and P. S. Verma, Phys. Rev. E **70**, in press.

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