

Abstract Submitted
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Effect of solvent annealing on phase separation of donor/acceptor species in organic mixtures¹ MIRIAM CEZZA, Department of Materials Science and Engineering, University of Maryland, College Park, MD, QIAN SHAO, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD, SHY-HAUH GUO², RAYMOND J. PHANEUF³, Department of Materials Science and Engineering, University of Maryland, College Park, MD — Studies on phase separation of mixtures of tetranitro zinc- phthalocyanine (tn-ZnPc) and [6,6]-phenyl-C₆₁-butyric acid methyl ester (PCBM) were performed in which we controlled the evaporation rate of the solvent (chloroform). Phase-contrast AFM analysis reveals that slowing down the evaporation rate of the solvent facilitates the nucleation of the donor component, and the two components phase-separate. The size of the molecular agglomerates and single small particles decreases for slow solvent evaporation and the density of small particles per unit area increases by an order of magnitude over the range studied.

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²The Laboratory for Physical Sciences, College Park, MD

³The Laboratory for Physical Sciences, College Park, MD

Miriam Cezza
University of Maryland

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