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Structure of polydisperse star branched polymers grown by diffusion[1] GUILLERMO RAMIREZ-SANTIAGO, Depto. de Fisica-Quimica, Instituto de Fisica, Universidad Nacional Autonoma de Mexico, CARLOS I. MENDOZA, Depto. de Polimeros, Instituto de Investigaciones en Materiales, Universidad Nacional Autonoma de Mexico — We present a numerical algorithm to construct polydisperse star branched polymers in two and three dimensions whose morphology is fully determined by diffusion. We analyze the monomer-monomer correlation function to calculate the fractal dimension of the structures. In addition, we carry out a finite-size analysis to determine the scaling properties of the radius of gyration.

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