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Diffusion Limited Branched Polymers[1] CARLOS MENDOZA, Instituto de Investigacion en Materiales, UNAM (MEXICO), GUILLERMO RAMIREZ-SANTIAGO, Instituto de Fisica, UNAM (MEXICO) — We introduce an algorithm to construct polymers with defined branching structure and whose morphology is determined by diffusion. We apply this procedure for the case of star-branched polymers and calculate their fractal dimension. We also carried out a finite size scaling analysis and determine the scaling properties of the radius of gyration. This procedure may be useful to construct large branched polymers near their relaxed configurations which in turn may help to determine equilibrium configurations of dilute solutions made of these polymers.

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