Stilck, Serra, and Machado Reply: Basically, the final conclusion in the preceding Comment [1] is correct, and therefore the dense polymerized phase is never reached when the recursion relations for the interacting monomer model are iterated and all the first neighbor attractive interactions are equal. However, the fixed point of the recursion relations which corresponds to the dense phase is still present, but becomes unstable when the attractive interactions which were neglected in the original calculations are included. This may be appreciated if a change of variables is performed in the recursion relations [1–3] of the preceding Comment, defining $\alpha = 1/a$, $\beta = b/a$, and $\gamma = c/a$. Let us call ω the Boltzmann weight corresponding to first neighbor pairs of unbonded monomers considered in the original model and $k\omega$ the Boltzmann weight of the interactions introduced in the preceding Comment. In the original calculations $k\omega = 1$ and the corrected version corresponds to $k = 1$. The recursion relations are

$$\alpha' = \frac{1}{\Delta}[\alpha^3 + 3\alpha^2\beta + (1 + 2\omega)\alpha\beta^2 + \omega^2\beta^3 + 2x\alpha + 2x\omega\beta + x^2\gamma], \tag{1}$$

$$\beta' = \frac{x^2}{\Delta}[\alpha + \omega^2\beta + 2x\omega\gamma], \tag{2}$$

$$\gamma' = \frac{1}{\Delta}[\alpha^3 + (1 + 2k\omega)\alpha^2\beta + (2k + k^2)\omega^2\alpha\beta^2 + 2xk\omega\alpha + k^2\omega^4\beta^3 + 2xk^2\omega^3\beta + (xk\omega)^2\gamma] \tag{3}$$

with

$$\Delta = 2x[\alpha^2 + 2\omega\alpha\beta + \omega^3\beta^2 + x\alpha\gamma + x\omega^2\beta\gamma + x^2\omega\gamma^2 + x\omega^2]. \tag{4}$$

There exists a fixed point at $\alpha^* = \beta^* = \gamma^* = 0$, and the Jacobian of the recursion relations calculated at this fixed point is given by

$$J = \begin{bmatrix} \frac{1}{x\omega^2} & \frac{1}{x\omega} & \frac{1}{2\omega^2} \\ \frac{1}{2\omega^2} & \frac{1}{2} & \frac{x}{\omega} \\ \frac{k\omega}{x\omega^2} & \frac{(k\omega)^2}{x\omega} & \frac{(k\omega)^2}{2\omega^2} \end{bmatrix}. \tag{5}$$

It may then be found that for $k > \sqrt{10}/5$ the dominant eigenvalue is always larger than 1, and therefore the dense phase is unstable. Thus, the introduction of additional attractive interactions has the effect of reversing the stability of the fixed point which corresponds to the dense phase. This fixed point is still stable in a region of the phase diagram of the solution on the Husimi tree of the model with attraction between bonds, and for this model defined on the square lattice recently evidence was found that such a phase may also be present [2].

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