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Spinodal decomposition of the charge ordering in the θ-based organic salt MAJED ABDEL-JAWAD, ICHIRO TERASAKI, Waseda University, HATSUMI MORI, University of Tokyo, TAKEHIKO MORI, Tokyo Institute of Technology — We have measured with X-ray diffraction, resistivity and thermopower the spinodal decomposition of the long range charge ordering in the organic compounds θ-(BEDT-TTF)$_2$RbZn(SCN)$_4$ and θ-(BEDT-TTF)$_2$RbCo(SCN)$_4$. Details of this spinodal decomposition reveals that the charge ordering growth in these compounds follows at first a two dimensional diffusion controlled mode followed abruptly by a change to a three dimensional diffusion controlled growth. Thermopower reveals that the long ranged charge ordered state in these compounds is characteristic of a system with strong on-site repulsion with narrow bandwidths. In contrasts to this, the thermopower of the short ranged charge ordering is anomalous not only in its value but also in its temperature dependence.

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