

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Domain formation in electronic nematic phase coupled to lattice deformation HYEONJIN DOH, YONG BAEK KIM, Dept. of Physics, Univ. of Toronto, Canada, KEUN HYUK AHN, Advanced Photon Source, Argonne National Laboratory — Motivated by the experiments on $\text{Sr}_3\text{Ru}_2\text{O}_7$, we have investigated the possibility of domain formation in electronic nematic phase coupled to lattice deformations. It has been suggested that the formation of the nematic order may explain the two consecutive metamagnetic transitions observed in $\text{Sr}_3\text{Ru}_2\text{O}_7$. Our study may serve as the explanation of the high residual resistivity observed in a range of magnetic fields.

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Date submitted: 29 Nov 2005

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