

Abstract Submitted  
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**Superconductivity in a new non-centrosymmetric compound of YCoC<sub>2</sub> composition** ORLANDO V. CIGARROA, SERGIO T. RENOSTO, Escola de Engenharia de Lorena - EEL - USP, TED GRANT, ZACHARY FISK, University of California - Irvine, A. JEFFERSON S. MACHADO, Escola de Engenharia de Lorena - EEL - USP — Superconductivity in compounds whose crystal structure lacks inversion symmetry are known to display intriguing properties that deviate from conventional BCS superconducting behavior. Here we report magnetization, resistivity, and heat capacity measurements on polycrystalline samples of non-centrosymmetric YCoC<sub>2</sub>, showing clear evidence of bulk superconductivity with a critical temperature of  $T_c = 4.2$  K. Interestingly the specific heat of the superconducting state deviates from conventional exponential temperature dependence, which is suggestive of possible unconventional superconducting behavior in YCoC<sub>2</sub>, similar to that seen in the isostructural and isoelectronic superconductor LaNiC<sub>2</sub>. Besides, these results strongly suggest that this material is a new multiband

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