

Abstract Submitted  
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**Growth structure and superconductivity of  $\text{Bi}_{1.7}\text{Bi}_{0.3}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10+\delta}$  ceramics synthesized from glass-crystal precursors processed in solar type ovens**<sup>1</sup> J.V. ACRIVOS, San Jose State University, D.D. GULAMOVA, Materials Science Institute SPA “Physics-Sun” Academy of Science, Uzbekistan , J.G. CHIGVINADZE, E.Andronikashvili Institute of Physics, Tbilisi, D. LOY, San Jose State University — The growth structure as well as the superconductivity of Bi/Pb2223 alloys is reported. Periodic lattice distortions (PLD) along the ab plane diagonal, direction of superconducting transport at the transition temperature,  $T_c=107\text{K}$  are found to dominate the growth. Transport induced by the PLD may be responsible for the sharp  $T_c$  transitions, and the bursts of frequency and Abrikosov oscillations observed above the transition temperature up to 150K. Chemical synthesis in a heliostat oven was followed by fast quenching of the melt and annealing at 840-850K, XRD near the Cu K-edge, and  $T_c$  measured by axial-torsional vibrations in transverse magnetic fields.  $T_c$  and phase purity obtained by green solid state chemistry, in a solar spectrum, will be discussed.

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