

Abstract Submitted
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Growth of Molybdenum Oxide Nano-Micro Structures by Thermal Annealing Process SEYAD AHMAD MAHDAVI ARDAKANI, Aviation Technology College, Tehran, Iran, SAJJAD TOLLABIMAZRAEHNO, Johannes Kepler University, Altenberger Str. 69, 4040 Linz, Austria, MARYAM RAFTARI, The University of Sheffield, Western Bank, Sheffield S10 2TN, UK, ABAS AZARIAN, University of Qom, Qom, Iran, SEYED MOHAMMAD MAHDAVI, Sharif University of Technology, Azadi Avenue, Tehran 14588, Iran, AZAM IRAJIZAD, Institute for Nanoscience and nanotechnology Sharif University of Technology, Azadi Avenue, Tehran 14588, Iran — The needle and planar molybdenum oxide structures on molybdenum foil were grown by thermal annealing process. The effects of different parameters such as oxygen flow rate, presence of oxygen, annealing temperatures and annealing time on structures, grain size and aspect ratio of nano/micro structures were studied. It is found that the density of structures is only function of oxygen flow rate and annealing temperature. The maximum density of MoO₃ nanorods were observed at annealing temperature 530°C in air. The mechanism of the crystals growth was found for synthesized nanorods.

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