

In-situ spatially-resolved assessment of laser irradiation-induced phase transformations in hexagonal MoO₃ microrods

P. Almodóvar¹, C. Díaz-Guerra¹, J. Ramírez-Castellanos², J. M. González-Calbet²

¹*Departamento de Física de Materiales, Facultad de Ciencias Físicas, Universidad Complutense de Madrid, Ciudad Universitaria s/n, 28040 Madrid, Spain.*

²*Departamento de Química Inorgánica, Facultad de Ciencias Químicas, Universidad Complutense de Madrid, Ciudad Universitaria s/n, 28040 Madrid, Spain.*

Supplementary information

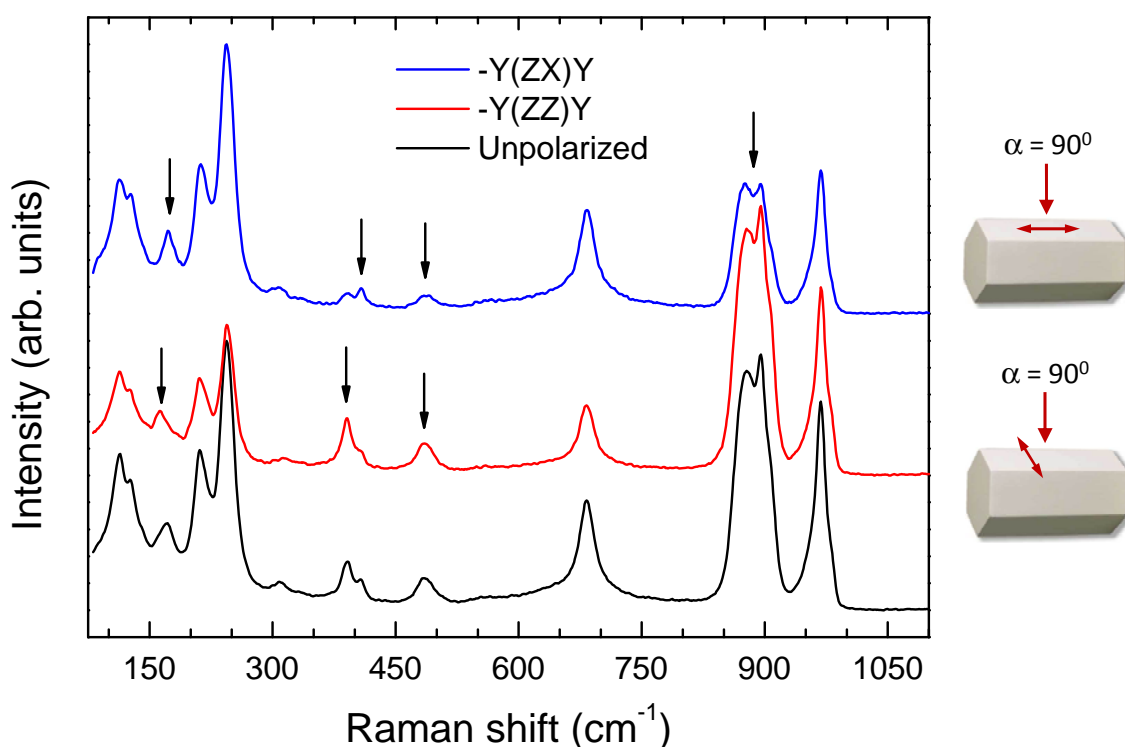


Figure S1. Polarized Raman spectra (Porto notation) of the as-grown microrods. Clear changes can be observed in the relative intensities of several peaks, like those centered at 162, 173, 390, 407, 878 and 899 cm⁻¹ (marked with black arrows), which supports the single crystal character of the samples.

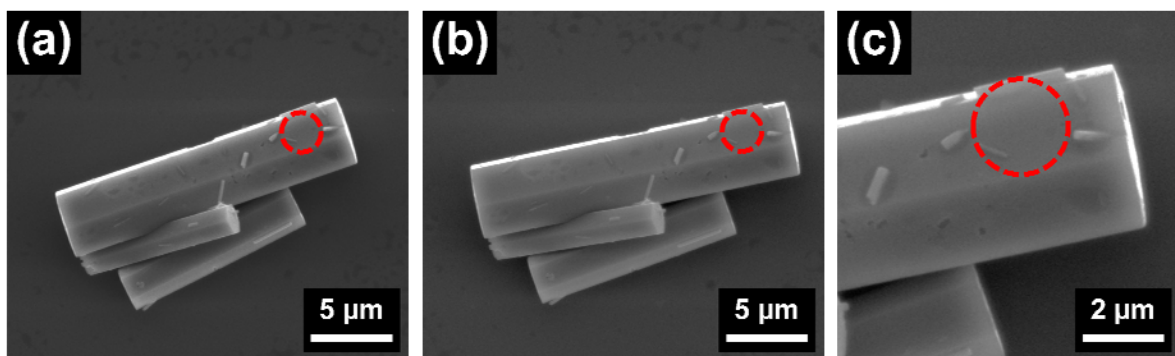


Figure S2. SEM images of an as-grown microrod before (a) and after (b,c) red (633 nm) laser irradiation ($6 \times 10^4 \text{ W/cm}^2$). The red circles indicate the area where the laser beam was focused. These images show the absence of morphological changes induced by laser irradiation.

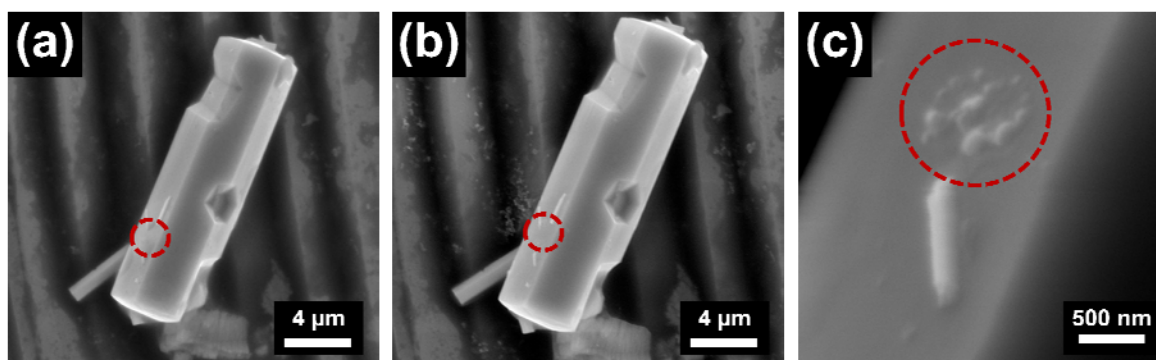


Figure S3. SEM images of an as-grown microrod before (a) and after (b,c) UV (325 nm) laser irradiation ($2.7 \times 10^4 \text{ W/cm}^2$). The red circles indicate the area where the laser beam was focused. These images show that irradiation with the UV laser slightly modifies the surface appearance of the as-grown microrods without altering the essential hexagonal prismatic microrod morphology.