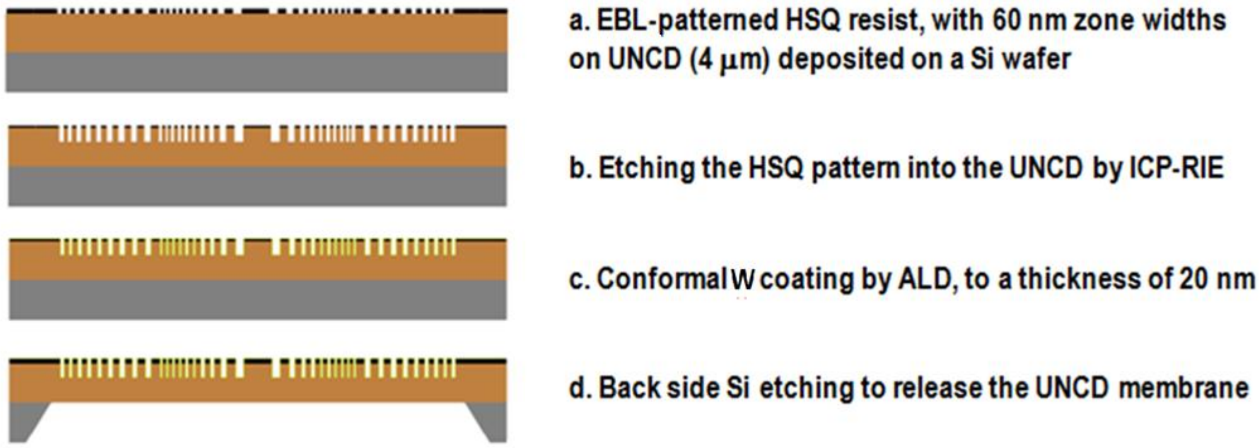

a. EBL-patterned HSQ resist, with 60 nm zone widths on UNCD (4 µm) deposited on a Si wafer

b. Etching the HSQ pattern into the UNCD by ICP-RIE

c. Conformal W coating by ALD, to a thickness of 20 nm

d. Back side Si etching to release the UNCD membrane

Fig.1. Fabrication steps of a diamond-scaffold, frequency multiplied Fresnel zone plate

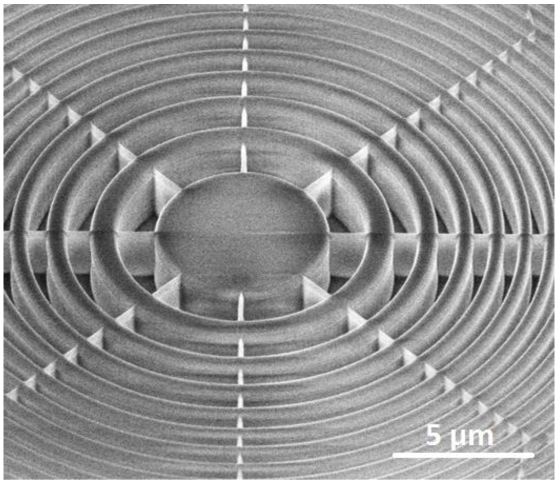

Fig.2. Scaffold for Fresnel zone plate with 2.1-µm-heigh structures etched into UNCD

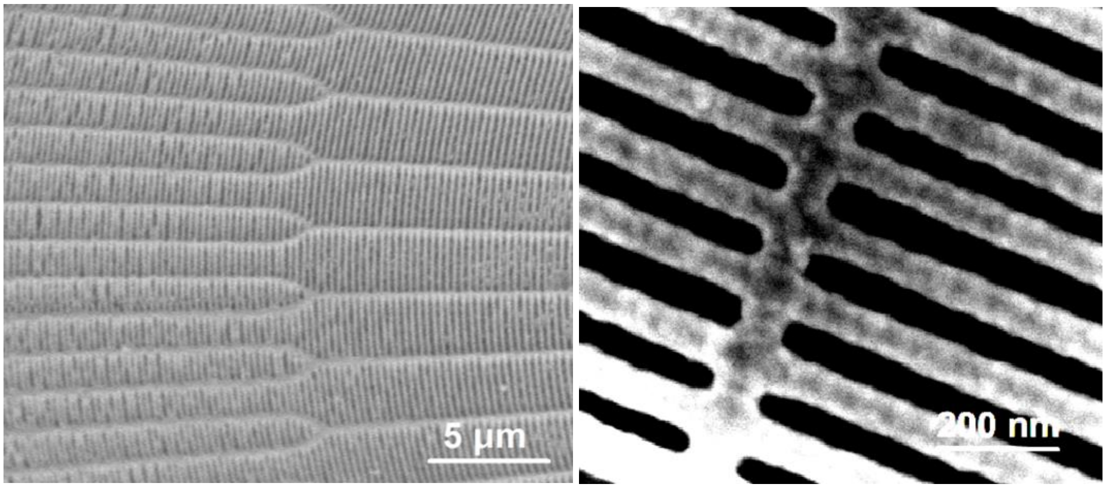

Fig.3. Detail of a UNCD scaffold coated with 20 nm of W. a) General view of the high-resolution area; b) Detail with high magnification