

Materials List for:

Fabrication of Magnetic Nanostructures on Silicon Nitride Membranes for Magnetic Vortex Studies Using Transmission Microscopy Techniques

Meena Dhankhar¹, Marek Vaňatka¹, Michal Urbanek¹

¹CEITEC BUT, Brno University of Technology

Correspondence to: Michal Urbanek at Michal.Urbaneck@ceitec.vutbr.cz

URL: <https://www.jove.com/video/57817>

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Materials

Name	Company	Catalog Number	Comments
SiN Membrane - TEM	Silson	SiRN-TEM-200-0.25-500	TEM membrane
SiN Membrane - MTXM	Silson	SiRN-5.0-200-3.0-200	MTXM membrane
3D adapter for spin coating			The model of the adapter for 3D printing can be downloaded at: https://www.thingiverse.com/thing:2808368
PMMA 950k electron beam resist	Allresist	AR-P 679.04	used for TEM sample
Electron beam resist developer	Allresist	AR 600-56	used for TEM sample
High-contrast electron beam resist	Allresist	AR-P 6200.13	used for the waveguide on the MTXM sample
High-contrast electron beam resist developer	Allresist	AR-600-546	used for the waveguide on the MTXM sample
Tetrakis(dimethylamido)titanium(IV)	Sigma Aldrich	669008 Aldrich	used for TiO ₂ thin film deposition by ALD
Electron beam resist for nanometer lithography	Allresist	AR-P 617.02	used as the bottom layer of bilayer resist for easier lift-off procedure
PMMA 950k electron beam resist	Allresist	AR-P 679.04	used as the top layer of bilayer resist for easier lift-off procedure
Electron beam resist developer	Allresist	AR 600-56	used for development of the disks on waveguide
Permalloy pellets	Kurt J Lesker	EVMPERMXXQ-D	used for the deposition of the magnetic layers
Titanium pellets	Kurt J Lesker	EVMTI45XXQD	used as adhesive layer for the gold waveguide
Gold pellets	Kurt J Lesker	EVMAUX40G	used for the deposition of the waveguide