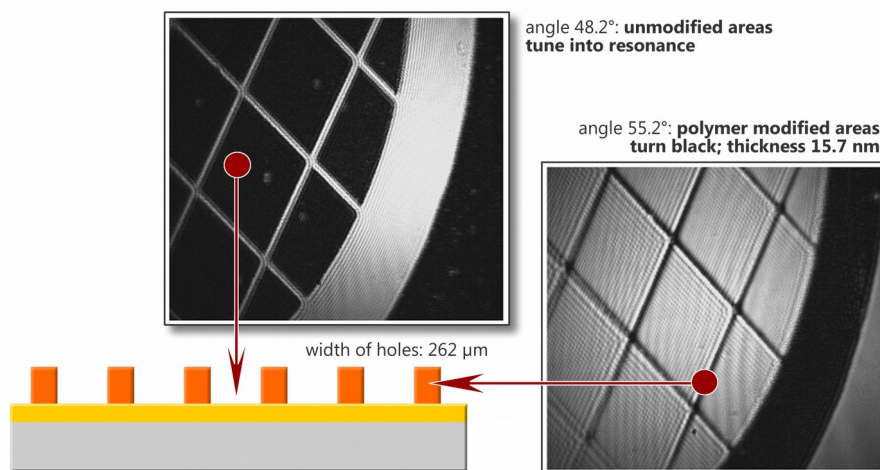


Surface plasmon imaging

Using Surface Plasmon Resonance instrumentation from Res-Tec and replacing the detector with a CCD camera allows you to image your surface structure. As an example this application note briefly describes measurements obtained from a patterned polymer layer. This layer was generated from a polystyrene film into which a simple microstructure was written by deep UV illumination through a copper grid serving as a mask.^{1,2}

Two images were generated from this sample. The first image was recorded at an angle of 48.2°. This angle corresponds to the resonance angle of the blank substrate used to generate this sample.



Accordingly, the unmodified areas appear black in the left image whereas the polymeric stripes are off resonance and light is reflected from these areas and detected by the camera. The opposite situation is found at 55.2°. Here the polymer stripes are „in resonance“ and appear black.

Note, that in such cases one should always record two such images that appear like the positive and negative image of each other.

¹ O. Prucker, M. Schimmel, G. Tovar, W. Knoll, J. Rühle, *Advanced Materials* **10**, 1073 (1998).

² G. Tovar, S. Paul, W. Knoll, O. Prucker, J. Rühle, *Supramolecular Science* **2**, 89 (1995).