

## **Generation and imaging of domains with the magnetic force microscope**

T. Göddenhenrich, U. Hartmann and C. Heiden

In magnetic force microscopy one has to avoid the destructive influence of the magnetic probe stray field. On the other hand, one can use this stray field to create at will magnetic patterns in recording media. Nickel tips with a parabolic shape show a strong stray field localized around the apex region. We used such probes to write patterns in magneto-optic thin films with a perpendicular magnetization. Our investigation shows a domain generation at a certain probe-sample distance depending on the strength of the probe field. Increasing the probe-sample distance allows us to image the created bit domain.