dose was varied in the 10–250 nC/mm^2 range. A contrast of 3.2 was found, similar to the values that have been reported for e-beam writing in HSQ. In subsequent experiments, the researchers have written parallel lines and gratings. They showed that by exposing an 850-nm-thick HSQ layer with a sufficiently high dose, the structures down to the 20-nm level remained standing without the use of supercritical drying, a process necessary for the successful development of e-beam–written structures. The researchers concluded that the performance of p-beam writing is dependent on how well the megaelectronvolt protons can be focused. The focused p-beam spot was measured to be 100 nm in diameter. The researchers said that the 20-nm linewidth was consistent with a process in which the dose at the peak of the beam was just enough to process the resist. Since p-beam technology is still in its infancy, the researchers foresee that its performance could be improved, and thus it is a promising new direct-write lithographic technique with great potential for 3D high-spatial-density nanofabrication.

ROSALÍA SERNA

Erratum

The schematic illustration of the basic self-assembly process featured on the cover and on p. 700 of the October 2005 issue of *MRS Bulletin* was reproduced with permission from the Web site of the FQRNT Centre for Self-Assembled Chemical Structures in Quebec, Canada.

Selective Recognition of Bacterial Membranes Achieved by Zinc(II) Coordination Complexes

The immune system and candidates for antimicrobial drug candidates need to have the ability to selectively recognize bacterial versus mammalian cell membranes *in vitro*. This recognition is usually mediated by components that are present on the surface of the cell. In an advance article of *Chemical Communications* (on-line publication, February 16; DOI: 10.1039/b517519d), B.D. Smith from the University of Notre Dame, W.M. Leevy from Notre Dame and Philip Morris, and their coworkers have reported selective recognition of bacterial membranes (*E. coli*, *P. aeruginosa*, and *S. aureus*) by fluorescently labeled bis[zinc(II)-DPA] coordination complexes. The fluorescent zinc-containing compounds were added to human saliva, which was chosen as a medium because it is well known to contain many types of bacteria as well as at least three types of mammalian cells. The researchers found that the bacteria were clearly stained by the zinc fluorescent probe in preference to the human cells. Another attribute of this staining procedure is that the compounds associate with the membrane surfaces and do not penetrate into the interior of bilayers, distinguishing between membranes on the basis of anionic surface charge on the bacterial membrane surface. This designer compound provides a platform that can be modified and expanded to numerous reporter constructs and antibiotic agents, the researchers said.

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