

ATOMIC FORCE MICROSCOPY OF AgBr CRYSTALS AND ADSORBED GELATIN FILMS

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Abstract

Atomic force microscopy of the (111) surface of macroscopic AgBr crystals revealed steps ranging in height from two atomic layers up to 10 nm, lying predominantly along the $\langle 110 \rangle$ and $\langle 112 \rangle$ families of crystal directions. Rods of elemental Ag, formed via photoreduction, were observed along the $\langle 110 \rangle$ family of directions. Images of adsorbed gelatin films revealed circular pores with diameters of order 10-100 nm, extending to the AgBr surface. The length of deposition time, the pH and concentration of the gelatin solution, and the presence of steps on the AgBr surface were observed to affect the size, number and location of pores in the gelatin films.

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