

## Multilayer Optics at CHESS

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Multilayers consisting of many alternating layers of thin films of low-Z and high-Z materials with the total period of 20 to 50 Å are capable of producing approximately 100 times more photons than traditional crystal optics when used in a double-crystal monochromator. They are routinely used at several CHESS beamlines for such applications as microbeam fluorescence, small-angle scattering, real-time X-ray scattering, radiography. In this talk a brief review of recent multilayer optics developments at CHESS will be presented. They include further improvement in the design of the internally cooled multilayers, low-contrast (high-resolution) multilayers, the use of non-traditional substrates such as GlidCop, and others. This work is a result of collective efforts of the CHESS Optics Group together with our collaborators from the APS (the group of Al Macrander) and OSMIC.