

## **Novel Grazing Incidence X-ray Optics**

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We will refer on novel approaches and technologies for advanced grazing incidence X-ray optics. They include (i) design and development of novel very wide field X-ray optical systems based on lobster eye optics, (ii) application of innovative materials for X-ray optics, with focus on precisely optically shaped Si wafers and thermally shaped glass foils, and (iii) design and development of grazing incidence X-ray optics with multilayers, with focus on replication. The X-ray optics described here offers a wide range of astronomical, laboratory and other applications.