

MATERIALS AND STRUCTURES SYMPOSIUM (C2)  
Advancements in Materials Applications and Rapid Prototyping (9)

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DEVELOPMENT OF A LIGHTWEIGHT, MONOLITHIC, ASPHERIC MIRROR UTILIZING FDM  
TECHNOLOGY

**Abstract**

This research consists of developing an aspheric, monolithic mirror and mounting unit utilizing Fused Deposition Modeling Rapid Prototyping technology. The monolithic mirror consists of a plastic substrate that is coated with an electrically conductive material and then electroplated with a UVC reflective material. Various parameters associated with Fused Deposition Modeling and methods for sealing the plastic surface are explored in detail.