

## **Graded Ge-Doped CH Capsule with Reduced Isolated Surface Domes\***

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One of the capsule designs for National Ignition Campaign (NIC) is a 1.7 mm diameter, 146  $\mu\text{m}$  thick graded Ge-doped CH capsule. These capsules must meet stringent specifications for outer and inner surface smoothness, 0.4 and 0.8 at. % Ge doping levels, layer thicknesses uniformity and isolated surface defects.

The presence of a few isolated domes of 20  $\mu\text{m}$  in diameter and  $\geq 1 \mu\text{m}$  in height on the capsules surface is the main reason that capsules may not meet the required isolated defect specification. We have identified and eliminated a source of the domes and have reduced their number and size by implementing a new roll-coat method. The number and size of isolated domes on the roll-coated shell were measured with a spherical interferometer. The uniformity the layer thickness is characterized by precision radiography, and shows an order of magnitude improvement with roll-coat method.

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