Tracking Fluid Flow Helps Identify Defect Formation Danger Zones for Spin-On Coatings

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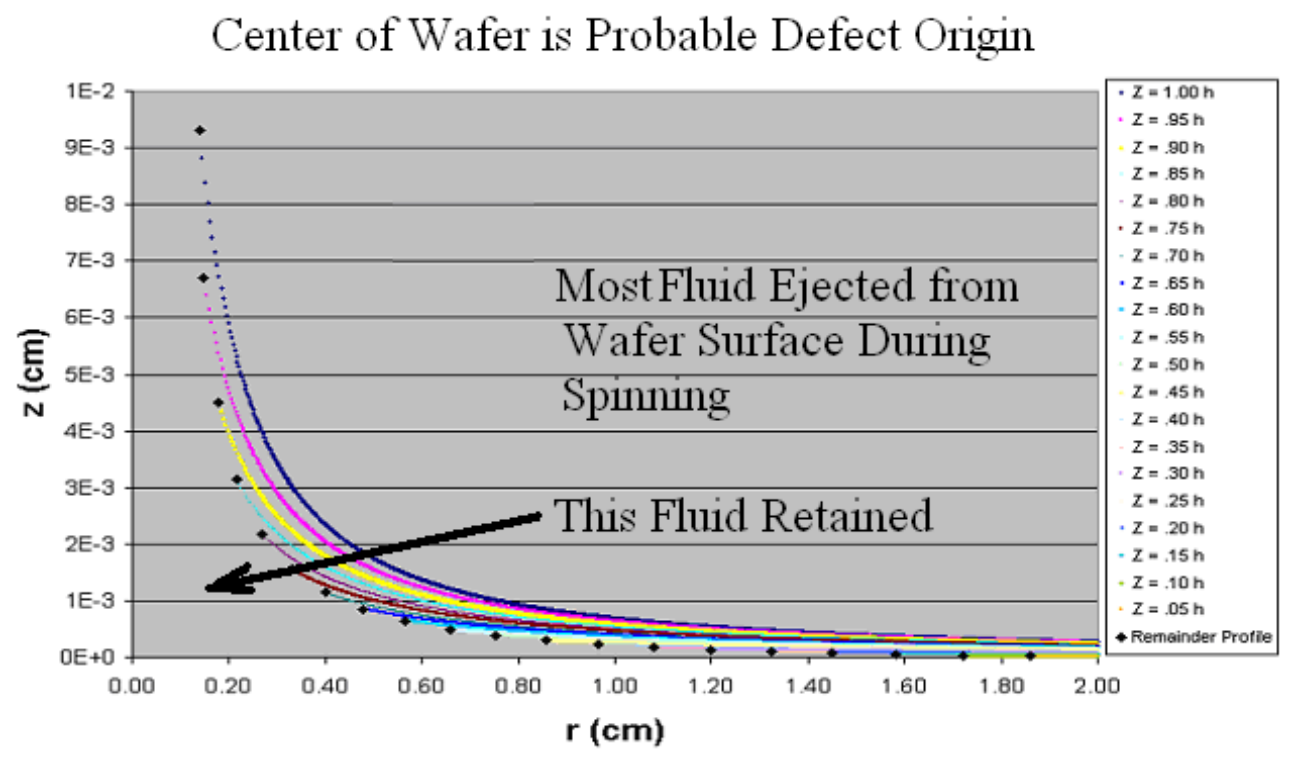
When coatings are deposited on silicon wafers using the standard spin-coating process there are unfortunate occasions when defects are found in the final coatings. Defects may have many sources and it is important to be able to diagnose defective coatings and arrive at methods for *preventing* those defects from forming.

Colored lines show trajectories taken by chosen volumes during flow.

Only fluid starting near the center of the wafer is retained – so particular care must be exercised to keep that part defect-free from the beginning.



Coating Quality Research Effort Gets Boost In New Location

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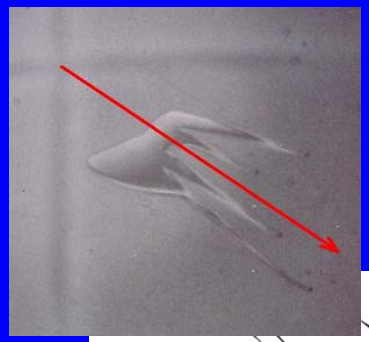
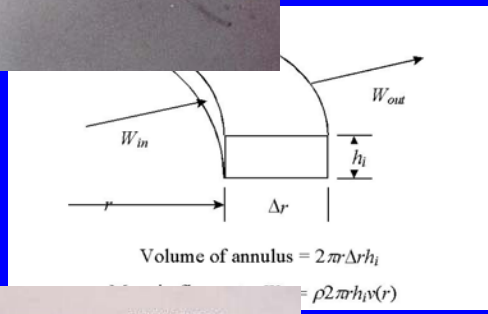
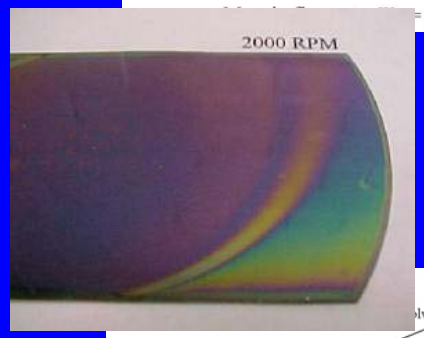
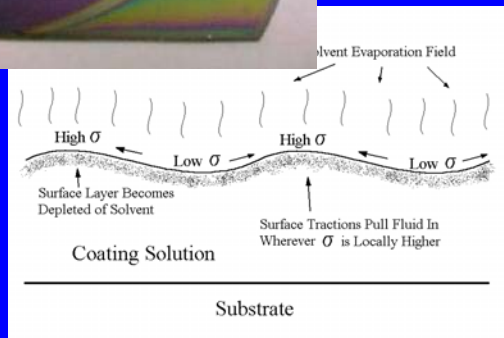
After many successful years studying coatings at Arizona, I have been hired away by Rutgers, The State University of New Jersey.

Part of the excitement of this transition is the ability to acquire substantial coating characterization equipment on NJ state money to help establish a state-of-the-art coating quality research laboratory – and then to push a variety of coating quality studies in collaboration with other faculty here as well as with industry.

In addition, the department at Rutgers will support one graduate student to work with me on a continuing basis to work on fundamental coating quality studies.

I have hired my first student into this position and she will be working on coatings for solar energy applications.