2008 Solar Annual Review Meeting

Session: CSP Advanced Systems (Tue 4/22/08 2:35-5:15)
Company or Organization: PPG Industries
Funding Opportunity: CSP Advanced Systems - High-Value Mirrors

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PPG Glass Technology Since 1883

Project Description

- The goal of this project is to develop and commercialize large-area mirrors with superior value, in terms of cost and performance, to existing mirrors that are currently available on the market

  - ***Solarphire® PV*** low-iron glass platform
  - Proprietary coating technology
  - PPG's domestic technology and manufacturing base

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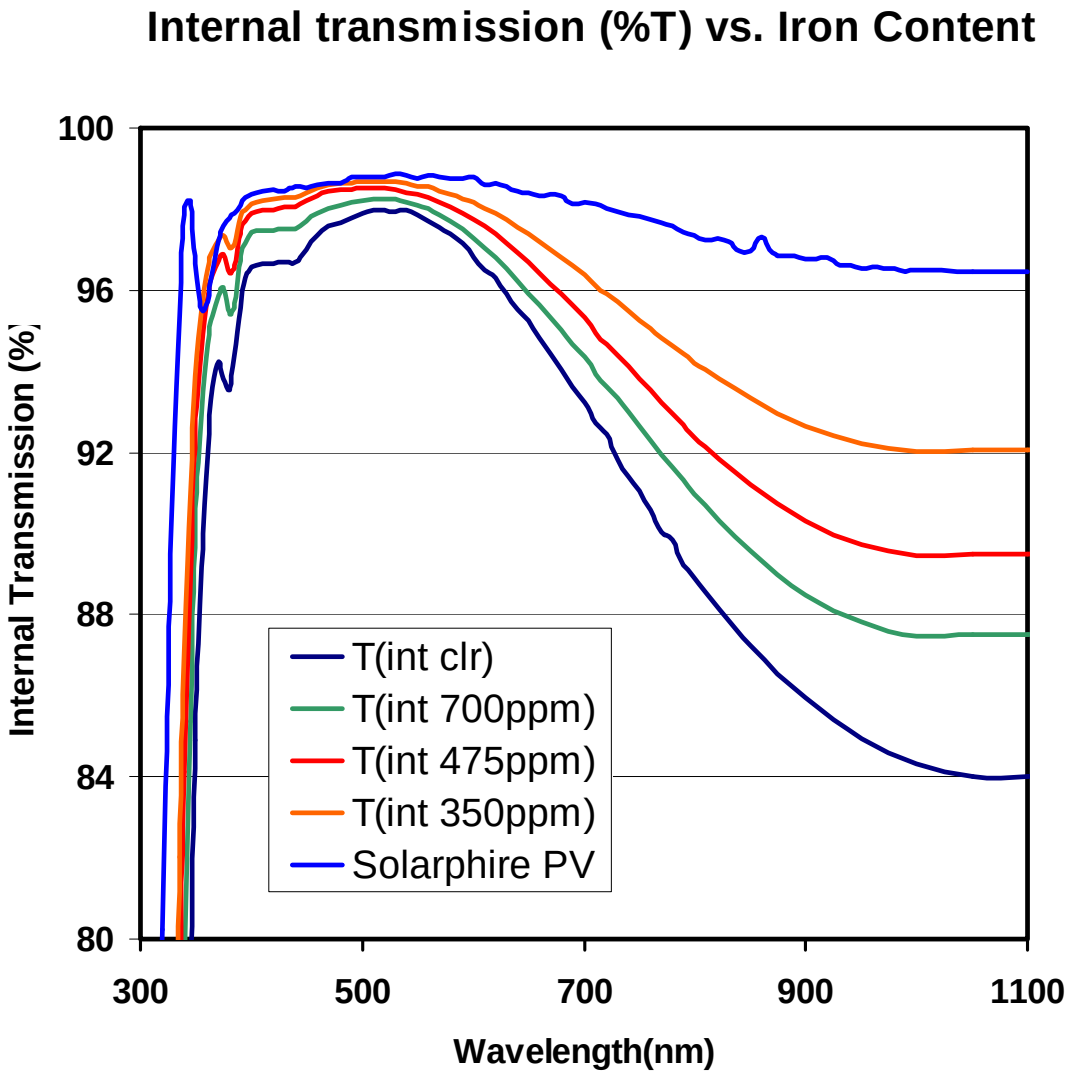
Solarphire® PV low-iron glass platform



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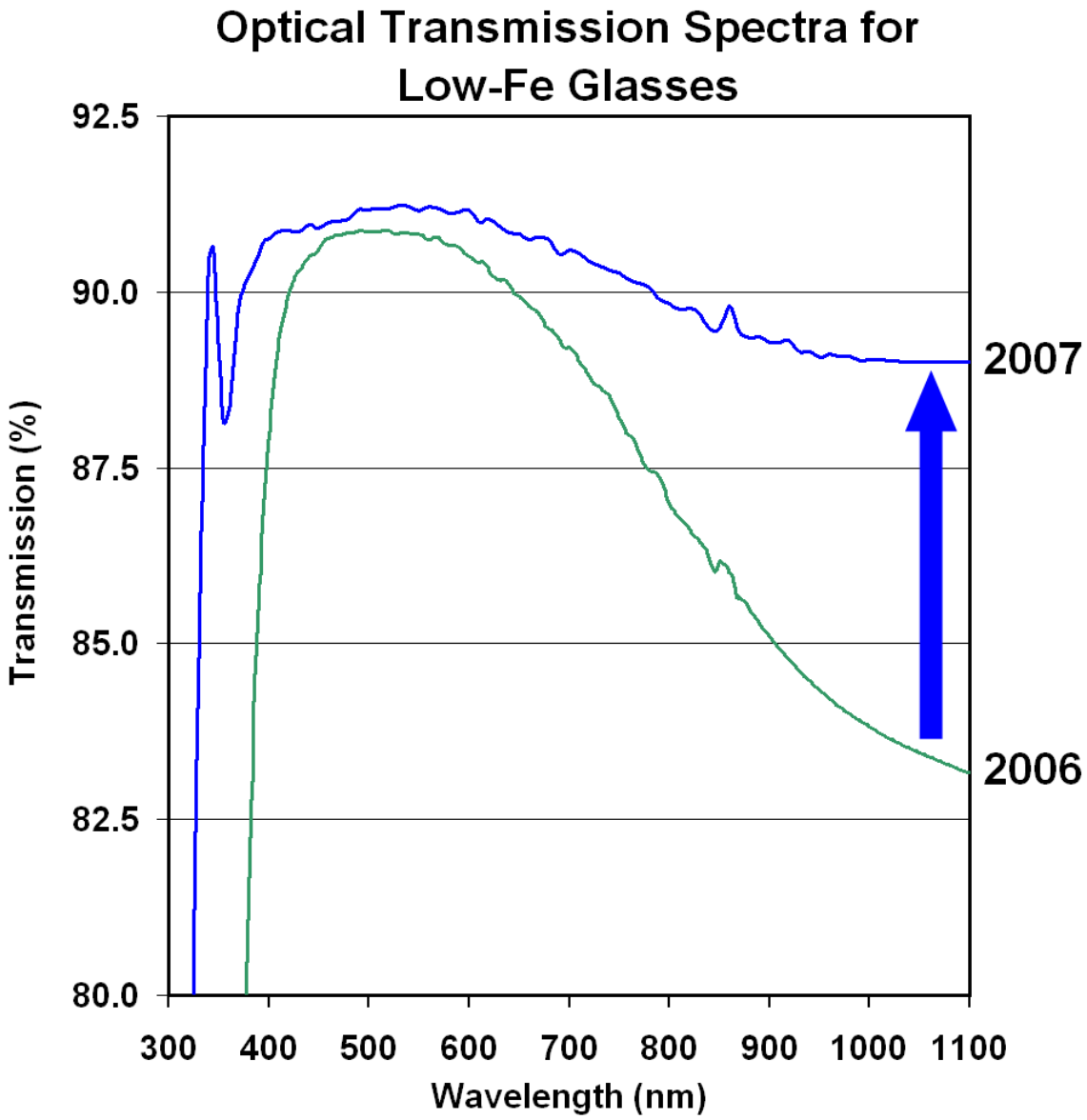
Solarphire® PV low-iron glass platform



Glass Technology
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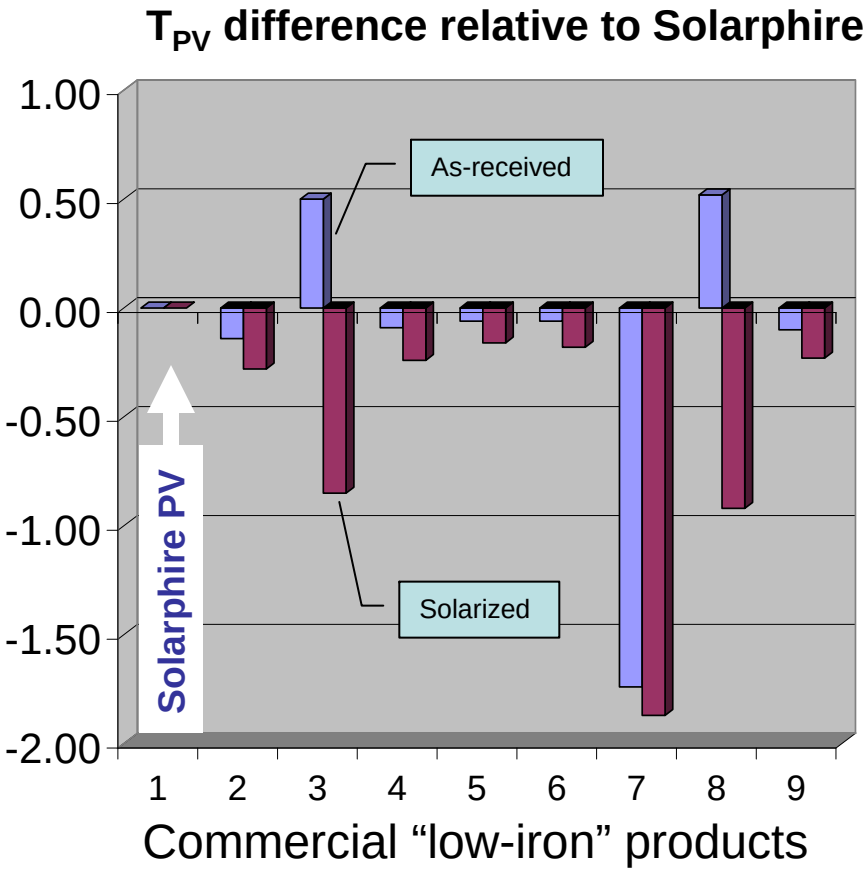
Solarphire® PV low-iron glass platform

Highest *measured* post solarized transmittance



- Less than 100 ppm of iron oxide
- Equal or higher transmittance than competing products
- Zero solarization

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Major FY08 Activities

- Phase I activities –
  address technical barriers and demonstrate feasibility
  - Alternate coating materials and structures to achieve optical performance and service lifetime requirements
  - Fabrication processes to produce mirror geometries to address needs of different CSP systems
  - Maintain a large-area / large-volume DFM approach
  - Evaluate LCOE impact using SAM
- Planned Milestones
  - Identify coating system candidates
  - Verify design
  - Evaluate fabrication of different mirror geometries
  - “Go / No Go” decision

Budget – Phase I

Resources ($)		
Total Project	DOE Funds	Cost Share
$403K	**$323K**	**$80K**

Anticipate all funds to be spent in FY'08

FY08 Progress Report

- Project start date of March 1, 2008
- Highlights
  - Durability protocols in place
  - Initial screening begun for protective coatings