

Coating Processes Boost Performance of Solar Cells



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NASA Technology

- ◆ Solar cell technology powers most of the functions performed by NASA's spacecraft, and improvements to the technology apply directly to its use on Earth
- ◆ NASA is constantly looking to improve solar cells by making them lighter, more efficient, and less expensive to manufacture



Partnership

- ◆ Under a Space Act Agreement with NASA, SPECMAT developed a fabrication method using room-temperature wet chemical growth (RTWCG)
- ◆ SPECMAT has patented and licensed RTWCG within the industry, and it can now be used for solar cell production, microelectronics, and photonic devices

Benefits

- ◆ RTWCG produces an antireflective layer of silicone oxide without relying on toxins or heat
- ◆ The coating has lower reflectance than standard coatings, and it cleans the cell's surface contacts
- ◆ The resulting cells are high performance and have the lowest cost per Watt in the industry