



SCI Engineered Materials®



Providing Targeted Solutions for Thin Film Applications™



SCI Engineered Materials®

As a global supplier of advanced materials, SCI Engineered Materials develops innovative and custom material solutions for the commercial success of customers.

We value open and consistent communication with our customers, delivering our products on time, and finding creative solutions to maximize our value add to your supply chain.

Corporate History



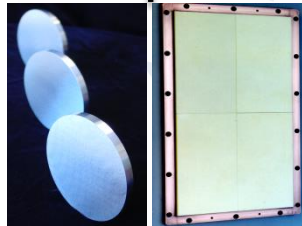
Third Frontier Grant
for Rotatable TCOs



New Facility



1987 1989 1991 2002 2004 2005 2008 2009 2017 2018



Began Manufacturing
Ruthenium and TCOs

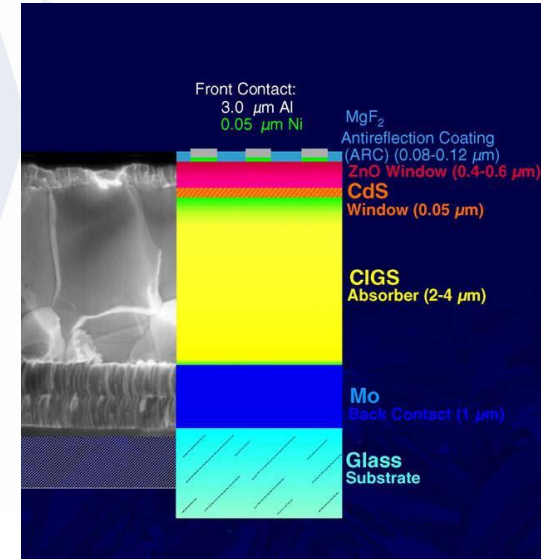


Third Frontier Grant for
Rotatable Bonding



The Company Today

- R&D and manufacturing facilities are located in Columbus, Ohio USA.
- A recognized leader in the development of materials used to increase Solar PV cell efficiency.
- Continuing to develop new materials for emerging applications including:
 - Buffer Layers
 - Decorative Coatings
 - Solid State Memory
 - Precious Metal Alloys for Optics



Major Markets Served

- Photonics
- Optics
- Solar Photovoltaic
- Roll to Roll (Flexible Substrates)
- Automotive



Uniquely Equipped for Metals.....

**With experience
supplying...**

Copper
Aluminum
Titanium
Tantalum
Niobium
Zirconium
Iridium
Rhenium
Palladium
Indium
Magnesium
Ruthenium
Silver
And more!

EDM



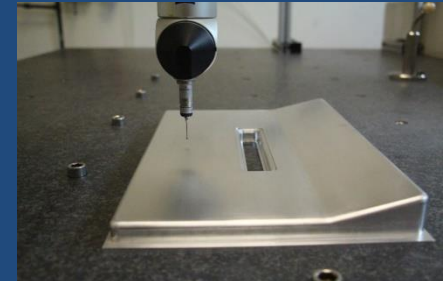
CNC Milling



CNC Turning



CMM



.....and Ceramics.

Spray Dry



Hot Press



Sintering



Machining



Custom Powders



Thermal Spray



Bonded Assemblies



Manufactured Materials Include...

AZO
ZTO
WO₃
MgO
ZMO
ZnOS
ZnS
BaZrO₃
TiO_x
BST
SnO₂

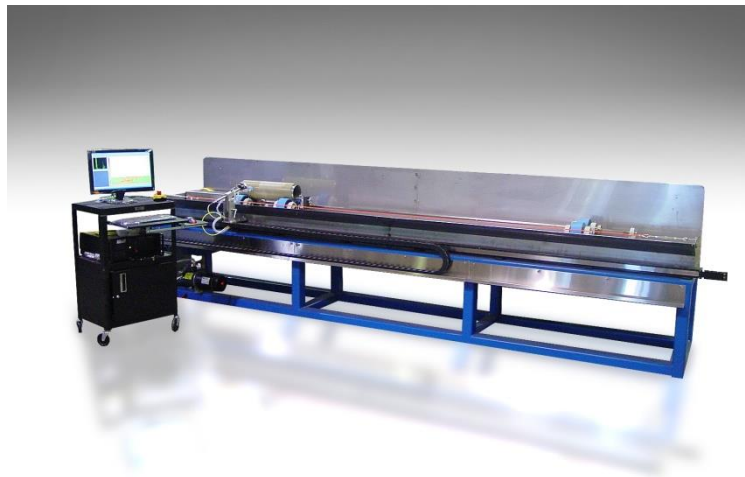
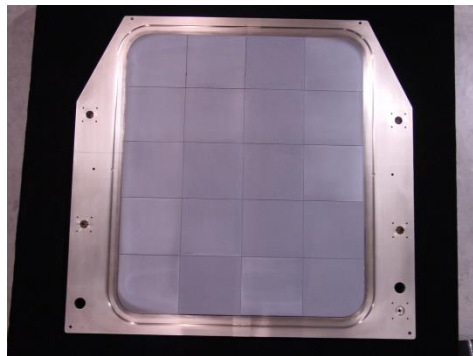
Industry Leading Bonding Technology



SCI Engineered Materials provide precision machining of backing plates & tubes to Customer or OEM specifications.

Backing plates & tubes are available in various materials including:

- Copper
- Molybdenum
- Stainless Steel
- Titanium



SCI has provided Indium Bonding services on planar targets for more than 20 years. We have expanded our bonding capabilities to include a service center for Rotatable Indium Bonding in China.

Quality Control Capabilities

Zeiss CMM



Thermo Scientific XRF



Rigaku XRD



Mistras Rotatable Ultrasonic C-Scan



Additional Equipment Includes:

- Mistras Planar Ultrasonic Scanner
- Quantachrome powder surface area analysis
- Sedigraph particle size analysis
- Sartorius Moisture Analyzer

Analytic and Development Capabilities

Angstrom Rotary Test Chamber



Additional Equipment Includes:

- Linseis DTA
- LECO carbon analyzer
- Hitachi U-4100 Spectrophotometer
- Veeco Dektak 6M Profiler

In-line Development Sputtering System



Hummer Sputtering System



Zeiss SEM with EDS capability



In Review

SCI is.....

- An advanced material innovator with over 30 years of experience in advanced material development and commercialization.
- A global supplier, servicing several PVD markets including Solar, Automotive, Roll to Roll, Optics, and Photonics.
- An innovator that co-develops materials to meet customer expectations.
- The Company that you should have full confidence in, to supply you with your sputtering material needs.