



TITLE:

Consultant, Perfect English Proofreading, New York, USA

QUALIFICATIONS:

- Ph.D., University of Connecticut, USA
- B.Sc., Rice University, USA

SPECIALIST TRAINING AND KNOWLEDGE:

- Chemical vapor deposition (CVD), gas-phase and laser-driven
- Powder processing and analysis:
 - ball milling, mixing, pressing
 - BET surface area, laser diffraction particle size analysis, and gas pycnometry
- Combustion synthesis
- Abrasive wear testing and material development
- Continuous manufacturing, process and equipment development

PROFESSIONAL AFFILIATIONS:

- Materials Research Society (MRS, United States)
- American Ceramic Society (ACerS)

AWARDS:

- University of Texas Postgraduate scholarship

PUBLICATIONS

- **S. Harrison** and H.L. Marcus (2000) Selective Area Laser Deposition (SALD) Joining of Monolithic Silicon Carbide Structures Using Dual Lasers. *Journal of Advanced Materials*, Issue #2.
- **S. Harrison** and H.L. Marcus (1999) Gas-Phase Selective Area Laser Deposition (SALD) Joining of SiC. *Materials and Design*. 20(2/3): 147-152.
- **S. Harrison**, X.-Q. Xie, K.J. Jakubenas and H.L. Marcus (1999) 29Si Solid-State MAS NMR Investigation of Selective Area Laser Deposition (SALD) Silicon Carbide Material. *Journal of the American Ceramic Society*. 82: 3221-3229.
- J.E. Crocker, **S. Harrison**, L. Sun, L.L. Shaw and H.L. Marcus (1998) Gas (SALD) and Gas/Powder (SALDVI) Solid Freeform Fabrication (SFF). *Journal of Metals*, 50(12): 21-23.
- K.J. Jakubenas, J.E. Crocker, **S. Harrison**, L. Sun, L.L. Shaw and H.L. Marcus (1998) Gas-Phase Solid Freeform Fabrication and Joining of Ceramics. *Naval Research Reviews*.

PATENTS (US)

- "Silicon-based composite material for wear resistance", 2004, Blasch Ceramics, pending
- "Plate-making process for lead acid battery", 2001, Delphi Technologies

Dr. Shay Harrison

Consultant

KEY SKILLS AND EXPERIENCE

Shay is a materials engineer with a strong background in technical research and development. He has a bachelor's degree from Rice University in Houston, Texas and a Ph.D. from the University of Connecticut in Storrs, Connecticut. Shay has worked for the last 12 years on academic and industrial research and development (R&D) projects in a wide range of subjects, including chemical kinetics, chemical vapor deposition, solid oxide fuel cell materials, and abrasion resistance. He has worked in the rapid prototyping, lead-acid battery, refractory ceramic manufacturing, and nuclear industries. Shay's technical interests focus on material processing routes and material analysis techniques, including x-ray diffraction, scanning electron microscopy, energy dispersive x-ray analysis, and transmission electron microscopy. He has two U.S. patents.

Shay earned a double major at Rice University in English. He has published several articles in peer-reviewed journals and other technical periodicals. He's been responsible for writing many quarterly and yearly progress reports for various U.S. federal government agencies, as well as internal industrial R&D documents. Shay has also contributed to several research grant proposals for state and federal programs.