ARO-FE Executive Bulletin

May 15 - Aug 15, 2002

The **Last Executive Bulletin** by G. D'Andrea

RECENT ABSTRACTS

Here are the latest Abstracts of Conferences co-sponsored by ARO-FE and recorded in the ARO-FE Website. Please click ***Blue Titles*** for details.

FEEDBACK.ppt

BGM II Bulk Metallic Glasses II (Bulk Amorphous Alloys)

QDQC The first international Workshop on Quantum Dots for Quantum Computing and Classical Size Effect Circuits

MOC'01 The Eighth Microoptics Conference

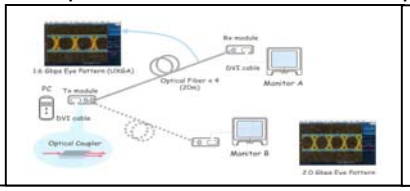
Ceramic Workshop Low Cost Production of Ceramics and Related Materials

EMAP2001 The 3rd International Symposium on Electronics Materials and Packaging

ICSCRM2001 International Conference on Silicon Carbide and related Material 2001

MOST INTERESTING ITEM

- presented at the July 2002 Optoelectronics Conference in Tokyo: The **Optical DVI (Digital Visual Interface) Link with Plural Outputs** (up to 16 outputs & low EMI). The core technology of this system is **the Optical Sheet Bus** (OSB) that uses planar optical waveguides for the transmission of the signals and allows multipoint-to-multipoint connections. It can transmit high quality signals up to 200 meters at bit rates up to 2 Gbps without using high cost circuits and devices. It uses an Oxide-confined VCSEL wavelength of 780 and 850 nm and plastic cladding multimode optical fiber. It's excellent equipment for Broadcasting or for use in Educational media. Possible OSB applications Include: image data transmission for full-color copiers and printers; optical coupler for home and automobile LAN's, etc.



MOST INTERESTING SITE VISITS

1. University of Nagasaki and their **Coating Reactors.** In particular the one using a Co-axial Magnetron Pulsed Plasma (CMPP) and the other using a Coaxial Electron Cyclotron Resonance Plasma (CECRP). Both of these systems are designed to **Sputter Coatings at IDs of Long Tubes.** An inner coating system with use of scanning CECRP is shown. Localized ECR plasma was generated inside the coaxial metallic tube and was transported over 2m along the tube by computer scanning the mirror-type magnetic field generated with 20 coils. Ti was successful deposited on the ID of a 30mm tube having a length of 2300mm.

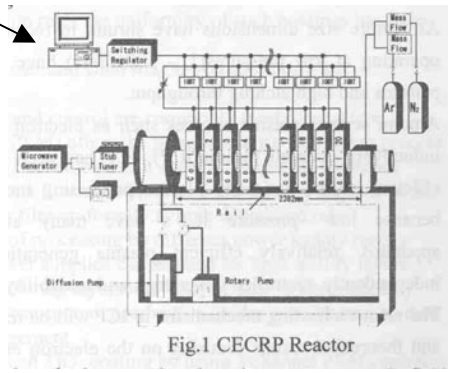
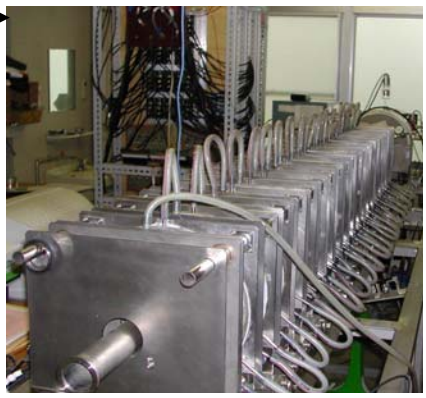
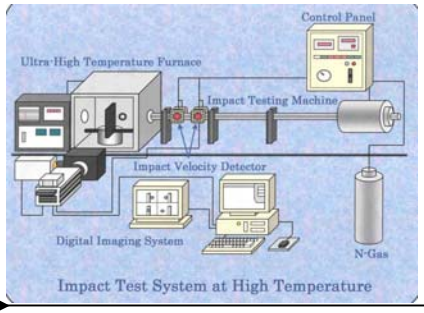


Fig.1 CECRP Reactor



2. Takushoku University:

Visited Dr. Kasano and his **High Velocity Impact Tester** (using a steel ball projectile). The meeting was very successful. In fact, tests were performed on the ARL FGM samples made of Ti/Ti B2. The apparatus consisted of a two meter long barrel, target chamber with sample, the chamber and N-gas, Control panel, Digital oscilloscope, Impact velocity detector, Ultra high-speed camera unit with its flash unit a high resolution monitor and a personal computer for the camera control. A 5mm DIA ball weighing 0.5 gm was launched at a velocity of 240m/sec against the sample. The Ti side of the FGM Disk survived the test. The Ti/TiB2 behaved as expected.



Impact Test System at High Temperature

Please contact Dr. D'Andrea for more information on the Most Interesting Item & Visits.

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