

Materials Processing and Testing

- FLIR Systems Inc. ThermaCAM SCM1000 with Thermal Imaging System Research RT Complete Package State of the Art 256 x256 Focal Plane Array solid state detector with over 65,000 elements; Focal point array that is fully calibrated for temperature measurement.
- Jeol 5600 Iv Scanning electron microscope system with system six spectral imaging system pioneer EDS detector; air cooled water recirculator.



- MTS Tytron system, MTS Micro-Force test system flextest SE Controller - plus 793.00 Flex Test SE automation (PC) System Software Key – Allows for static and dynamic testing over a very wide range of velocities (less than 1 micron/hr to 500 mm/second) and frequencies (0.001 hertz to 50 hertz).
- Loomis 232-16 DTM Extruder – Extrusion tonnage 16+ tons, Material cylinder (ID 2", length 8"), horizontal and vertical extrusion capability, extrusion speed (1-16 in/min) and variable pressure.



- Instron Model 5866 Material Testing System (capacity 2250 lbs) – Allows for testing and analysis of mechanical properties of ceramics & other materials; Capable of performing tension testing, 3 point and 4 point bending tests.



- Jaygo Inc Model SK6, Sigma Blade Lab mixer (1.5 liter working capacity) Alumina coating on the contact SS parts Adjustable blade rotation speeds (15 - 100 rpm), maximum torque up to 100mN.

- Excel Technologies XL42901 5-objective, inverted stage nikon epiphot light microscope w/EDIH digital camera and video communication hardware; 3.3 million pixel digital image resolution, image capture/storage and editing capability.
- Prolab Benchtop Mass Spectrometer with complete vacuum pumping system. Features include: 300 amu triple filter quadrupole, Dual (Faraday/Channeltron multiplier) detector assembly, ultra low flow capillary inlet for atmospheric sampling, 110 volt internal heater jacket and Thermo ONIX's automatic calibration software for quantitative gas measurement with matrix inversion algorithms.
- Netzsch Electronic Dilatometer for measurement of thermo coefficients of expansion, Model DIL 402 PC/2/H. Temperature range up to 1500°C.
- CARVER Hydraulic Lab Press - with heated platens including 2 gauge manifold.



- Fisher Scientific Isotemp Lab Oven (pg 929)
- Carver 12 Ton Lab Press (13-872)
- Denver Instrument M Series Analytical Lab Balance, M-310, 0 to 310 grams.
- Allied Hightech Products TechCut 4 Precision low speed saw
- Systemic automation screen printer for MEA fabrication

