SEASON'S GREETINGS

FROM ALL AT

THE APPLIED SUPERCONDUCTIVITY CENTER

NATIONAL HIGH MAGNETIC FIELD LABORATORY

FLORIDA STATE UNIVERSITY

Front Image :

High density Bi-2212 filament macrostructure produced by the over-pressure (OP) technique developed at the Applied Superconductivity Center. The OP process almost eliminates the porosity that previously limited the transport critical current in Bi-2212 strands. This breakthrough will allow us to build the next generation of >30 T superconducting magnets using these round-wire multifilamentary wires.

Images by Peter J. Lee using our Field Emission Scanning Electron Microscope by combining images obtained using a conventional Everhart-Thornley SE detector, an in-lens SE detector and a backscattered electron detector in different color channels. The cross-sections were prepared and etched by Maxime Matras using strands fabricated by OST and heat treated by Jianyi Jiang and Maxime Matras at ASC.