

### **Abstract for CRADA between Applied Spectra, Inc. and NETL AGMT-0679**

Applied Spectra, as our industrial collaborator, is helping us develop our downhole LIBS sensor. Our part of the collaboration is the design, construction, and validation of the miniaturized fiber coupled laser whereas Applied Spectra will be providing technical guidance and control/analysis software. This will allow our system which is traditionally operated by a person to be automated in both data collection and analysis. This will allow our system to significantly increase its TRL.