

SENSOR PROBE FOR USE IN IN-SITU FO-LIBS SYSTEM

ABSTRACT

A sensor probe and a fiber-optic laser induced breakdown spectroscopy (FO-LIBS) system using the sensor probe. The sensor probe provides a sensing window at a side wall of the casing or at a terminal wall of the casing. The sensor probe may further define a cavity in which a plasma plume formed by laser irradiation of an in-situ sample can be at least partially received and detectable via a sensing window of the sensor probe. The cavity may be defined about the sensing window on one side of the sensing window, with a probe interior being on another side of the sensing window. A cover may be configured to be actuatable and/or deformable to open or close the cavity. The cavity is configured to have a default state in which the cavity is the closed cavity.

FIG. 2