

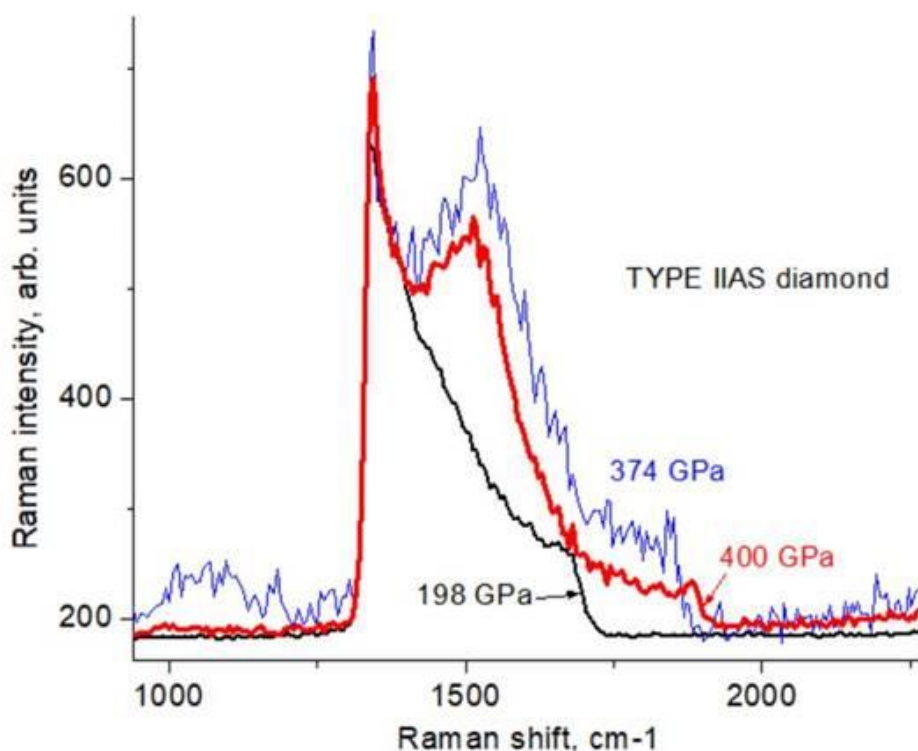
Measuring ultra high-pressure with Raman edge of type IIas RULF anvils from Almax easyLab

A diamond anvil cell has established over the past decades as the main tool to generate high to ultra high-pressure in the laboratory. In the continuous search for new states of matter or the quest for higher T_c superconductors, researchers have pushed the pressure limit to so-called Megabar regime (several 100 GPa's).

Although Ruby is a well-established optical method to measure pressure, it becomes limited above 80-100 GPa.

The diamond Raman scale, or Raman edge enables pressure measurements for pressure above 100 GPa. Our synthetic diamond type IIas Raman Ultra Low Fluorescence (RULF), have the required purity to enable such measurements to be carried out.

The graph below shows such results, courtesy of Dr Mikhail Eremets.



Graph showing the shift of the Raman edge at different pressures up to 400 GPa
Courtesy of Dr. Mikhail Eremets – Max Planck Institute for Chemistry (Mainz, Germany).