

Supplementary material

Pressure effects on the electrical transport properties of benzene

The electrodes and the sample configuration were illustrated in Fig. S1.

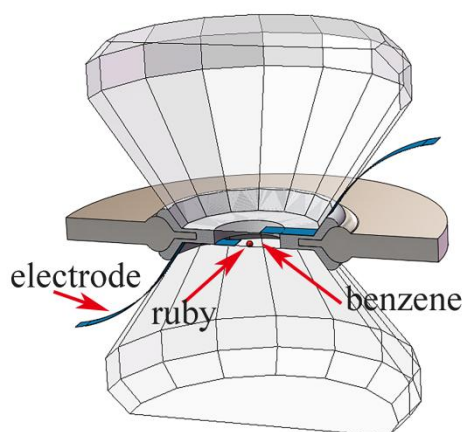


Fig. S1 The electrodes and the sample configuration.

To quantify the pressure effect on the electrical transport properties of benzene, the equivalent circuit method is used to fit the impedance spectra, as shown in the inset of Fig. S2, where CPE_1 are the constant phase elements to represent the charge/discharge activities of nonfaradic process in benzene molecular crystal, and the charge transfer resistance R_1 is determined by the semicircle deduced from the Z' -axis intercept, which is related to the resistance of benzene. The simulated results are in good agreement with the experimental data, indicating the validity of the circuits.

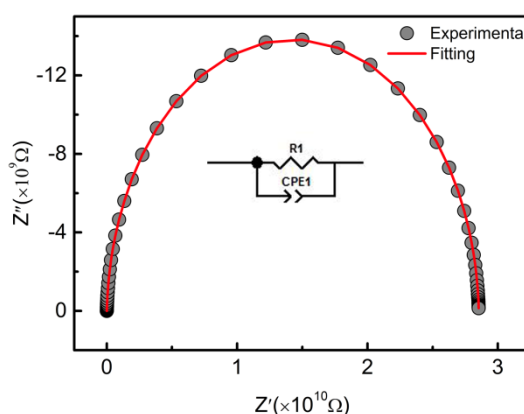


Fig. S2 The experimental and fitting data for benzene impedance spectra at different pressures. Lines are the fitted results with the equivalent circuit models describing the bulk (R_1 - CPE_1) shown in the inset.

The band gap as a function of pressure, with the solid line being a Lorentz fit to the

data, as shown in Fig. S3.

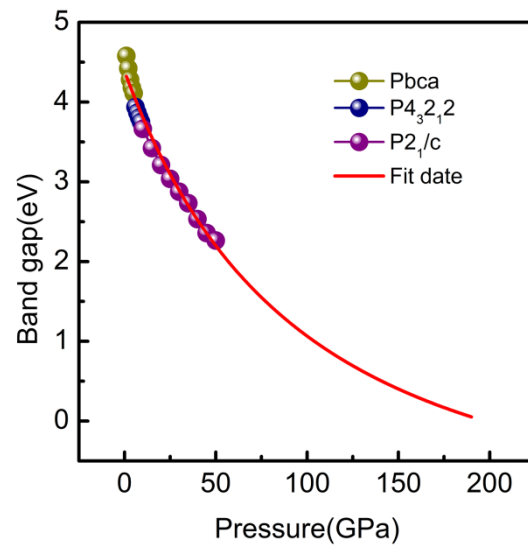


Fig. S3 The band gap as a function of pressure, with the solid line being a Lorentz fit to the data.