

Appendix

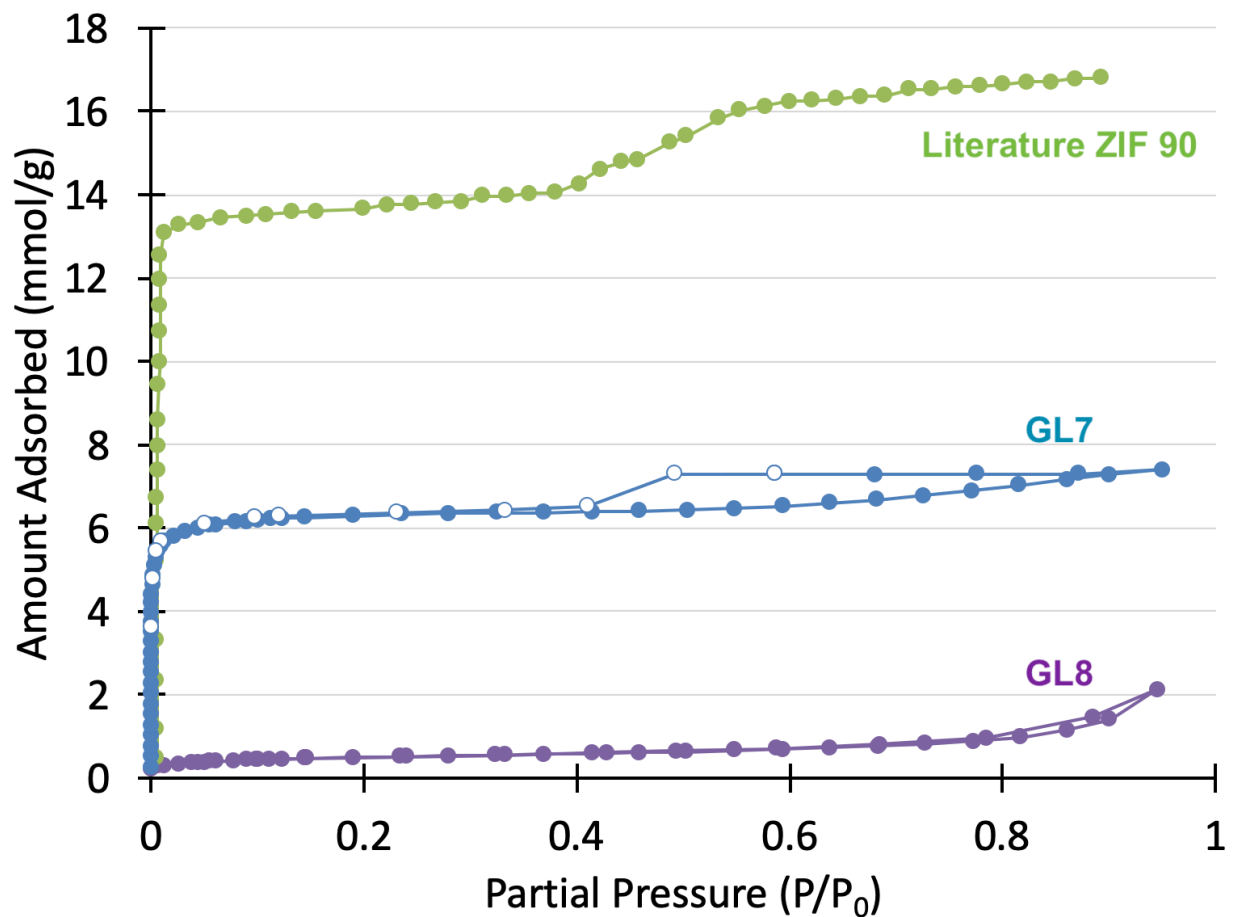


Figure 1: Adsorption isotherms of ZIF-90 with and without the trialkyl phosphate guests. GL7 was synthesized in a triethyl phosphate solvent, while GL8 used trimethyl phosphate as the solvent. Measurements were taken using a micromeritics ASAP machine, with N₂ as the adsorbent gas.

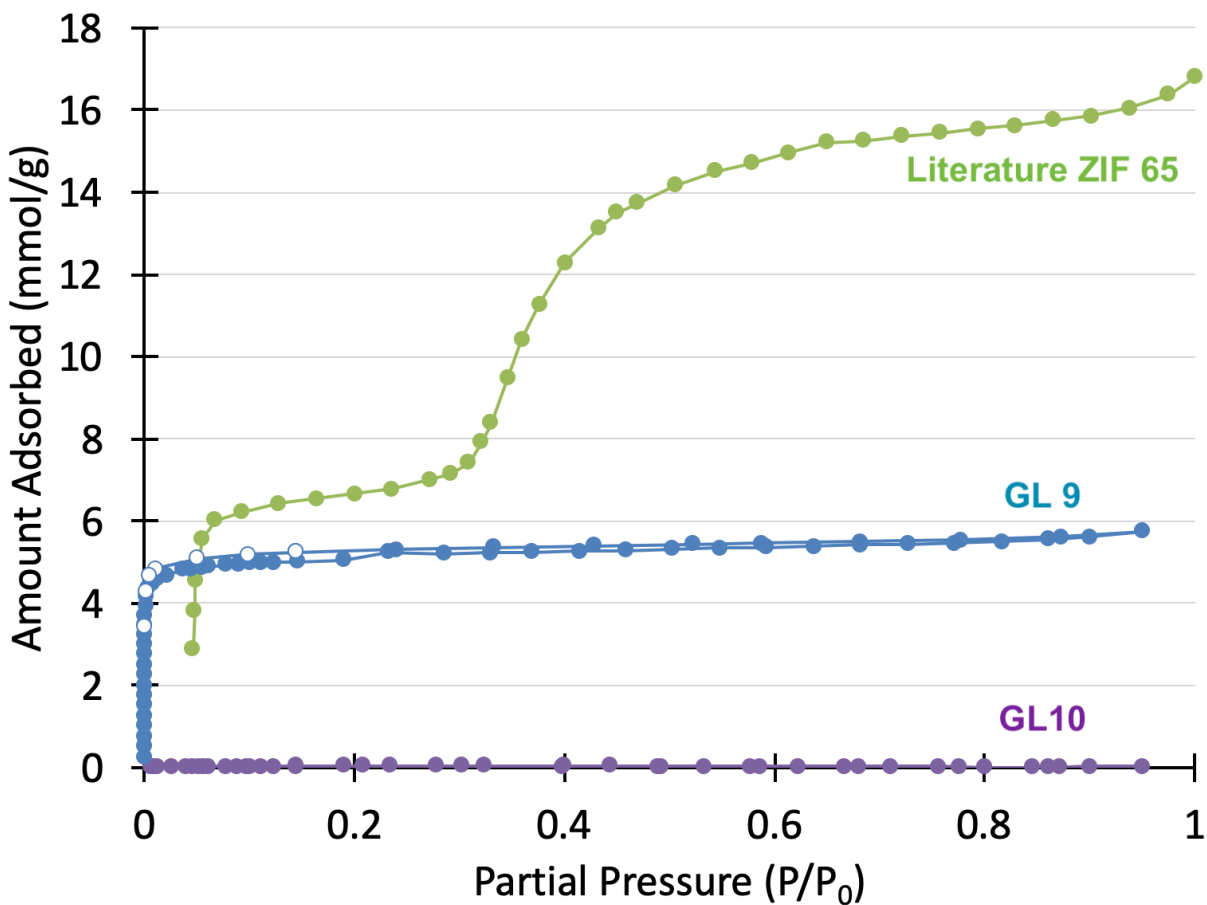


Figure 2: Adsorption isotherms of ZIF-65 with and without the trialkyl phosphate guests. GL10 was synthesized in a triethyl phosphate solvent, while GL9 used trimethyl phosphate as the solvent. Measurements were taken using a micromeritics ASAP machine, with N₂ as the adsorbent gas.

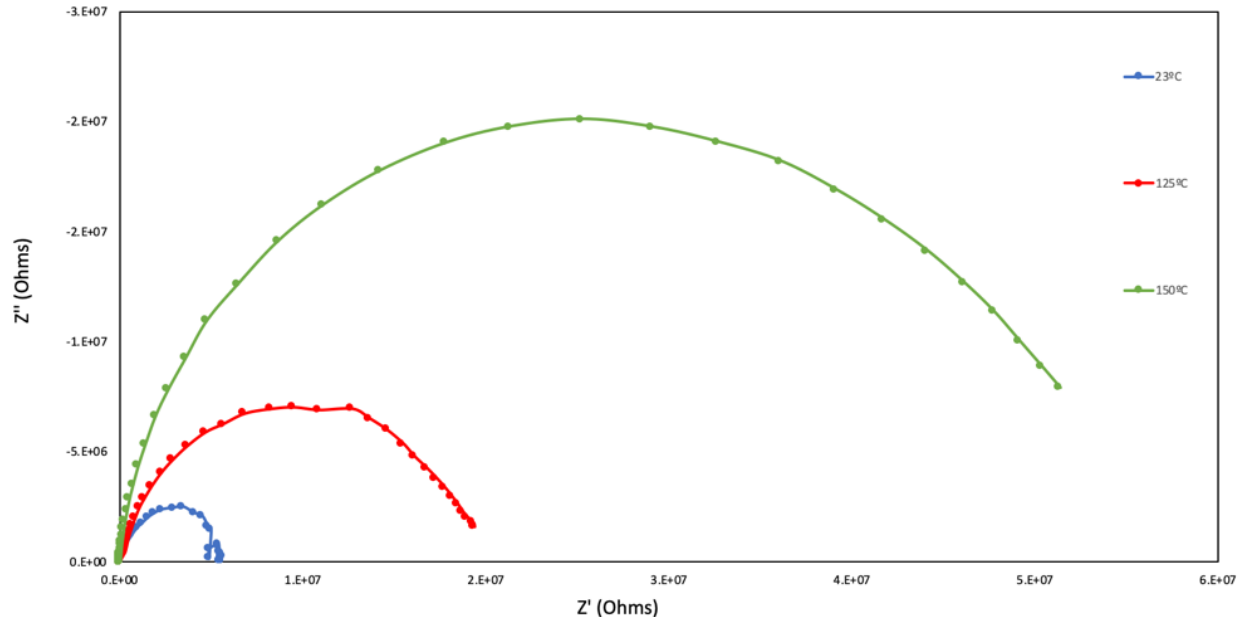


Figure 3: Nyquist plots of GL9 at increasing temperatures. Measurements were taken using a Versastat electrochemical impedance spectrometer.

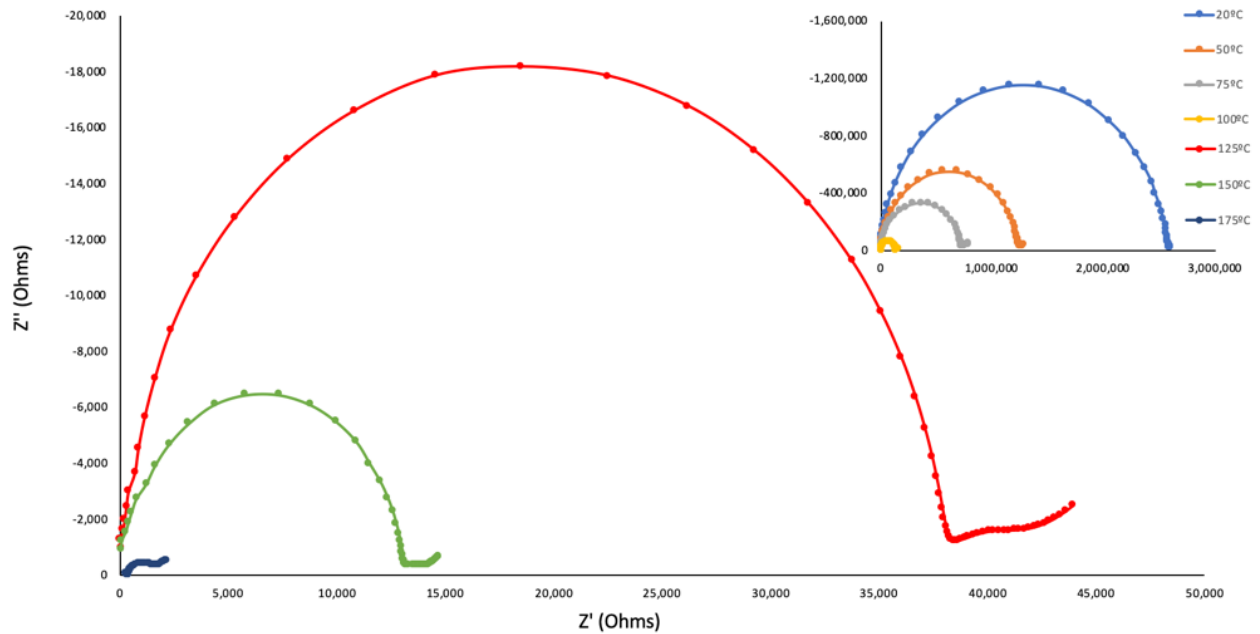


Figure 4: Nyquist plots of synthesized PBI at increasing temperatures. Measurements were taken using a Versastat electrochemical impedance spectrometer.

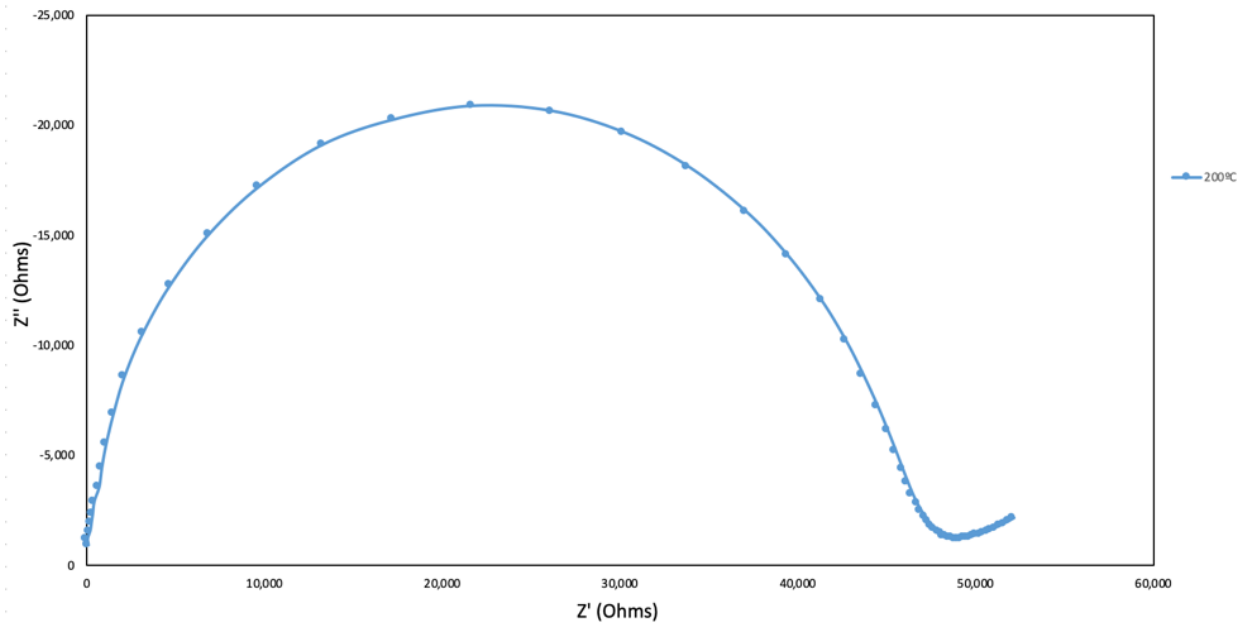


Figure 5: Nyquist plot of a hybrid pellet consisting of equal portions of both GL9 and PBI at 200°C. Measurements were taken using a Versastat electrochemical impedance spectrometer.