

Homework 3

Deadline of submission: 8 April

You use the same dataset.

1. As it was shown in the last week material (#6) the limits of the Kelvin equation define the limits of the pore size marking the mesopore range.
2. From the Kelvin equation calculate the relative pressure values corresponding to the narrowest and widest mesopores. The surface tension of liquid nitrogen is 8.94 mN/m. You can calculate the molar volume of nitrogen from the density of liquid nitrogen given in homework 1. (0.808 g/cm³). The contact angle is 0.
3. Using your isotherm data, calculate the pore volume corresponding to the mesopore range, supposing that all the gas adsorbed is in liquid form.