Conclusions.

- The compression of *hydrophobic weak polyelectrolyte* a gel initiates the phase transition showing up in a step-wise change of the gel density.

- The change of the gel density happens at a certain constant pressure, P_{tr}, which value is defined by c_s, pK and χ.

- P_{tr} increases with a decrease of pK and with an increase of c_s.

- The collapse of the gel is accompanied by its discharge, allowing all the neutralising ions to escape from the gel.

Oleg,do not forget to acknowledge friends