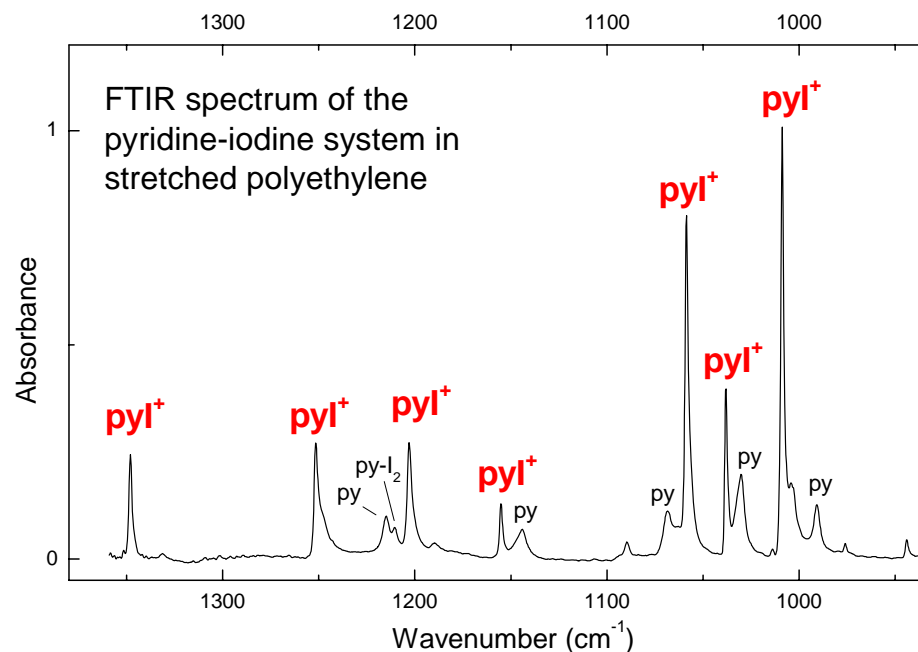
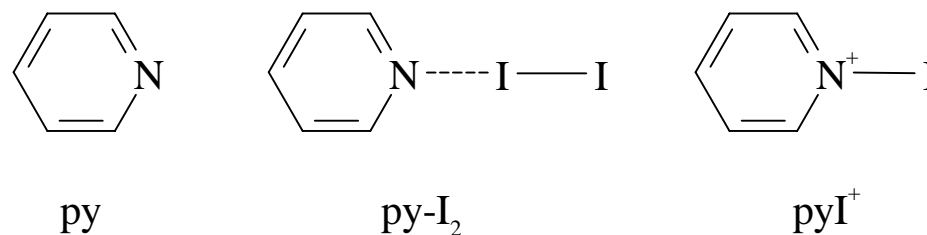


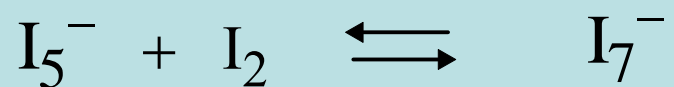
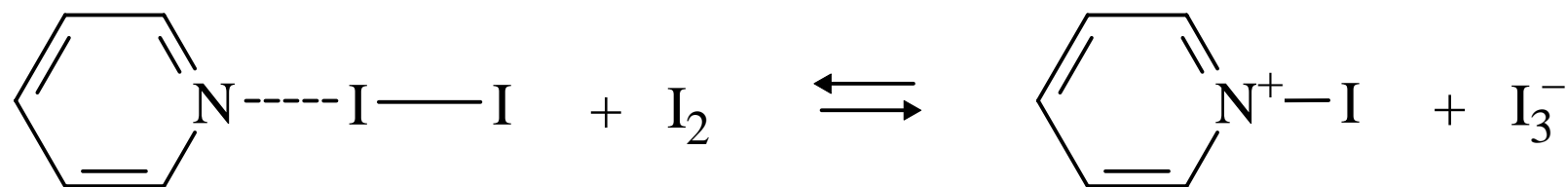
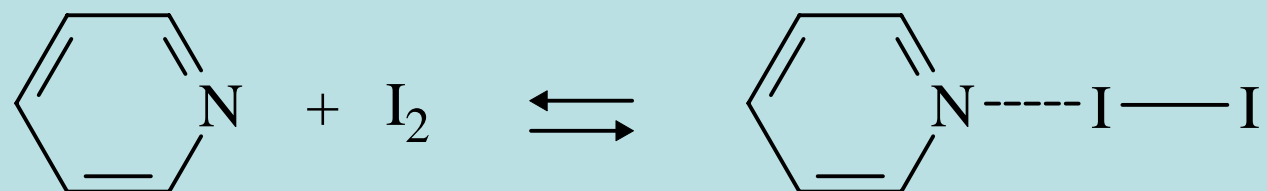
Project Suggestion:

FTIR spectroscopic investigation of the reaction between pyridine and iodine in a polyethylene matrix

In non-polar solvents, pyridine (py) and iodine (I_2) form a stable molecular complex, $py-I_2$. However, we recently discovered that in polyethylene, the main product is not $py-I_2$, but the *N*-iodo-pyridinium cation, pyI^+ . The spontaneous formation of charged species in an alkane medium is surprising. We suspect that the driving force for the reaction is the formation of polyiodide anions, I_n^- , in the channels of the polymer medium. The purpose of the project is a quantitative investigation of this interesting phenomenon, including a number of 4-substituted pyridine derivatives.

Jens Spanget-Larsen





(etc.)

Sample preparation



A sample of stretched polyethylene doped with pyridine in a container with iodine crystals (*left*), and a container with a corresponding sample of pure polyethylene to be used as reference (*right*).

