

Figure 1: Schematic representation of the ALD-FTIR setup operated in reflection mode. The optic chambers are separated from the ALD chamber by protected KBr windows.

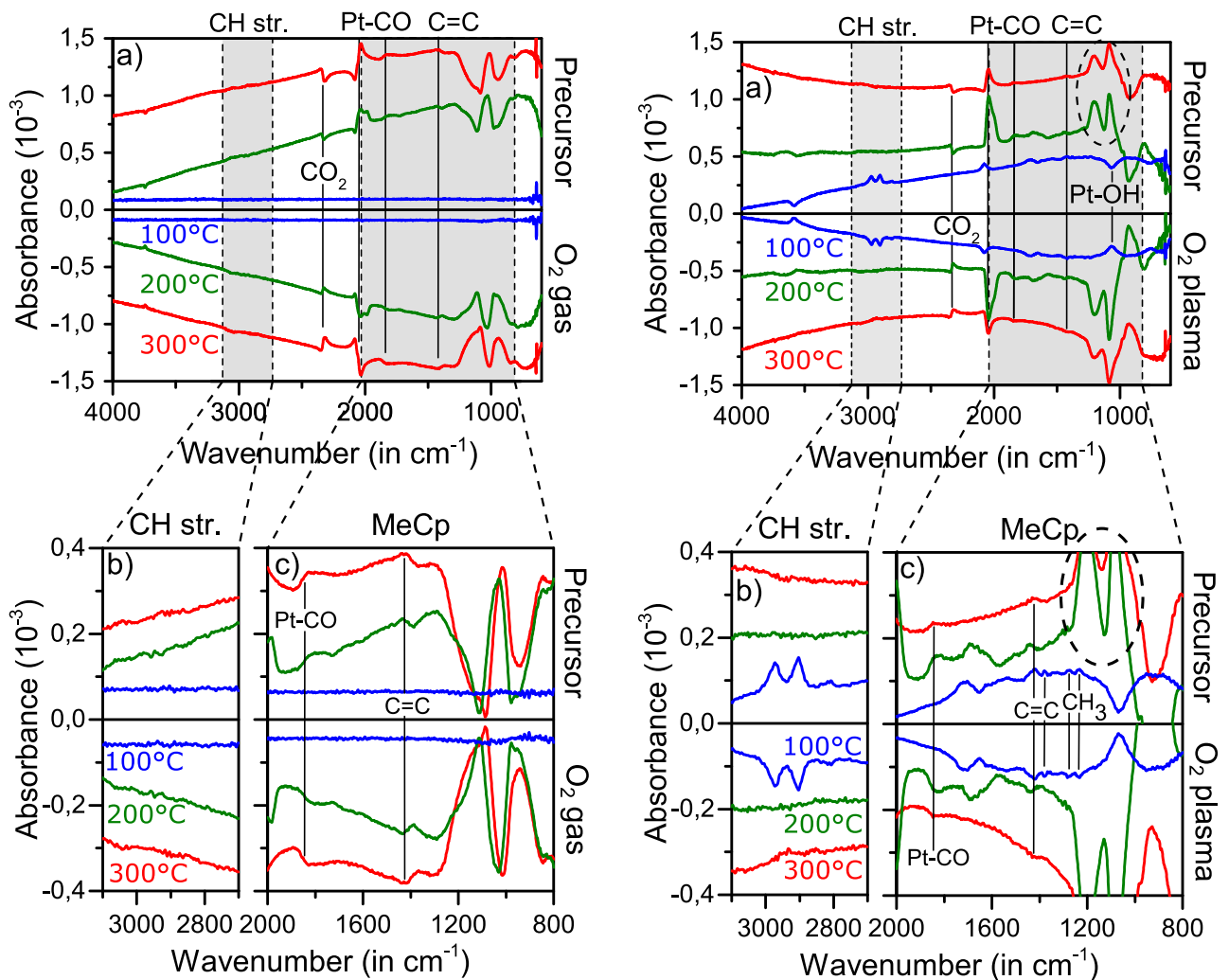


Figure 2: In-situ IR spectra after precursor and reactant exposures during a thermal Pt ALD process (on the left) and during a Plasma-Enhanced ALD process of Pt (on the right). The main region for CH stretching vibrations (panels b) shows that above 100°C there is no CH stretching present and thus dehydrogenation of the precursor ligands occurs. Panels c show the region where vibrations from the MeCp ligand are expected, there is an indication that C=C stretches are present at all temperatures. At a substrate temperature of 100°C there are more stretches present that can be related to the precursor ligands. The dashed oval in the PE-ALD process (top panel on the right) indicates absorption peaks from ether/ester like groups on the surface, these are not present in the thermal process.