

Supporting Information Available

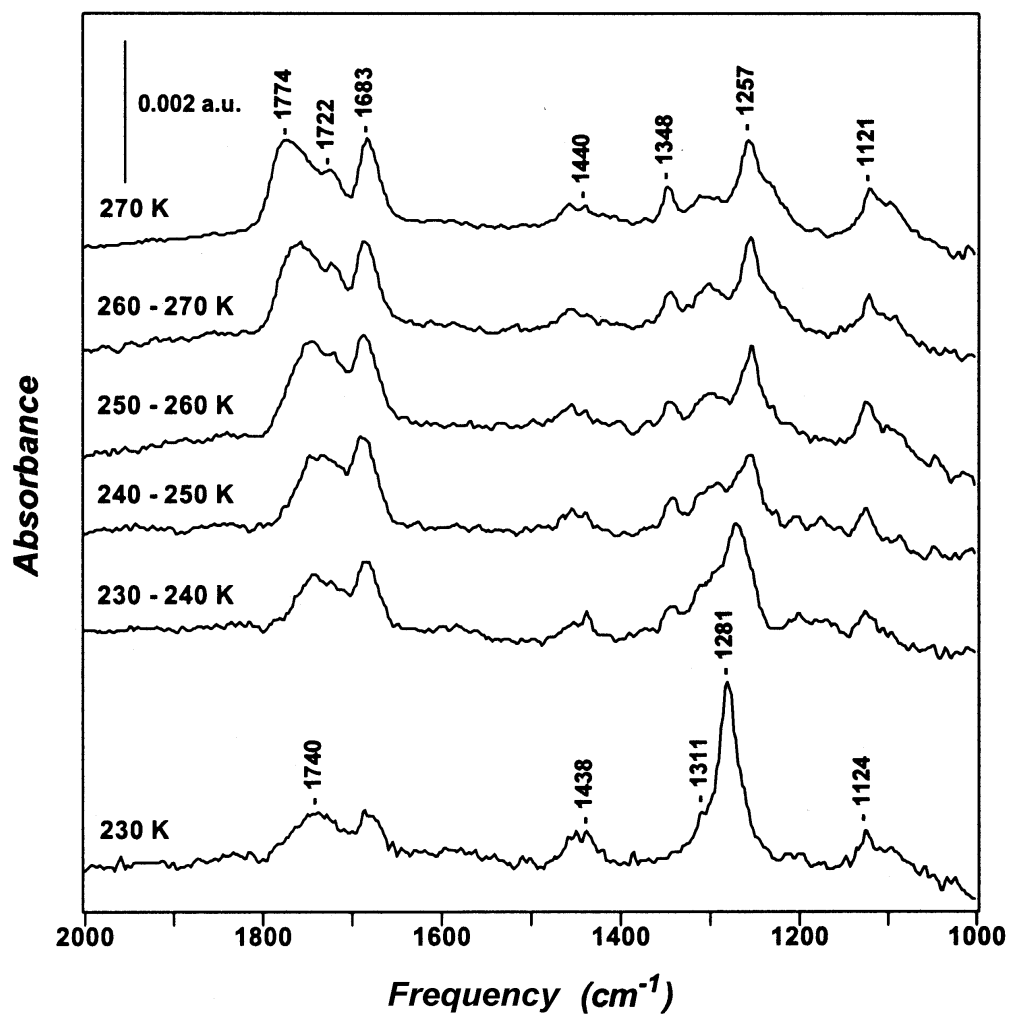


Figure SI-1.

RAIRS spectra acquired continuously during an anneal of methyl pyruvate on Ni (111) over the 230 - 270 K range. The initial exposure was performed to multilayer coverage at 105 K. The heating rate was 0.025 K/s.

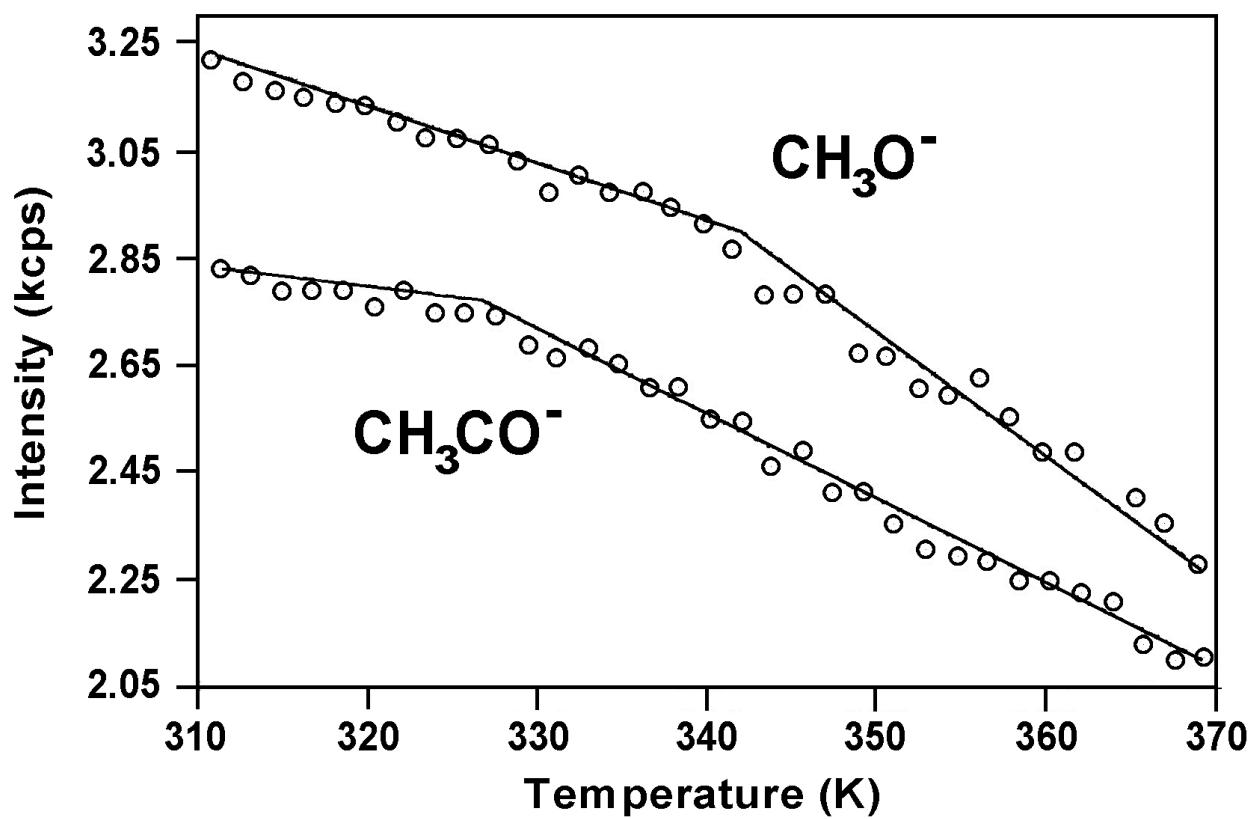


Figure SI-2.

Static secondary ion mass spectrometry data acquired continuously during an anneal of methyl myruvate on Ni (111).