

Supporting Information

Isocyanate Formation from Reactions of Early Lanthanide Metal Atoms with NO and CO in Solid Argon

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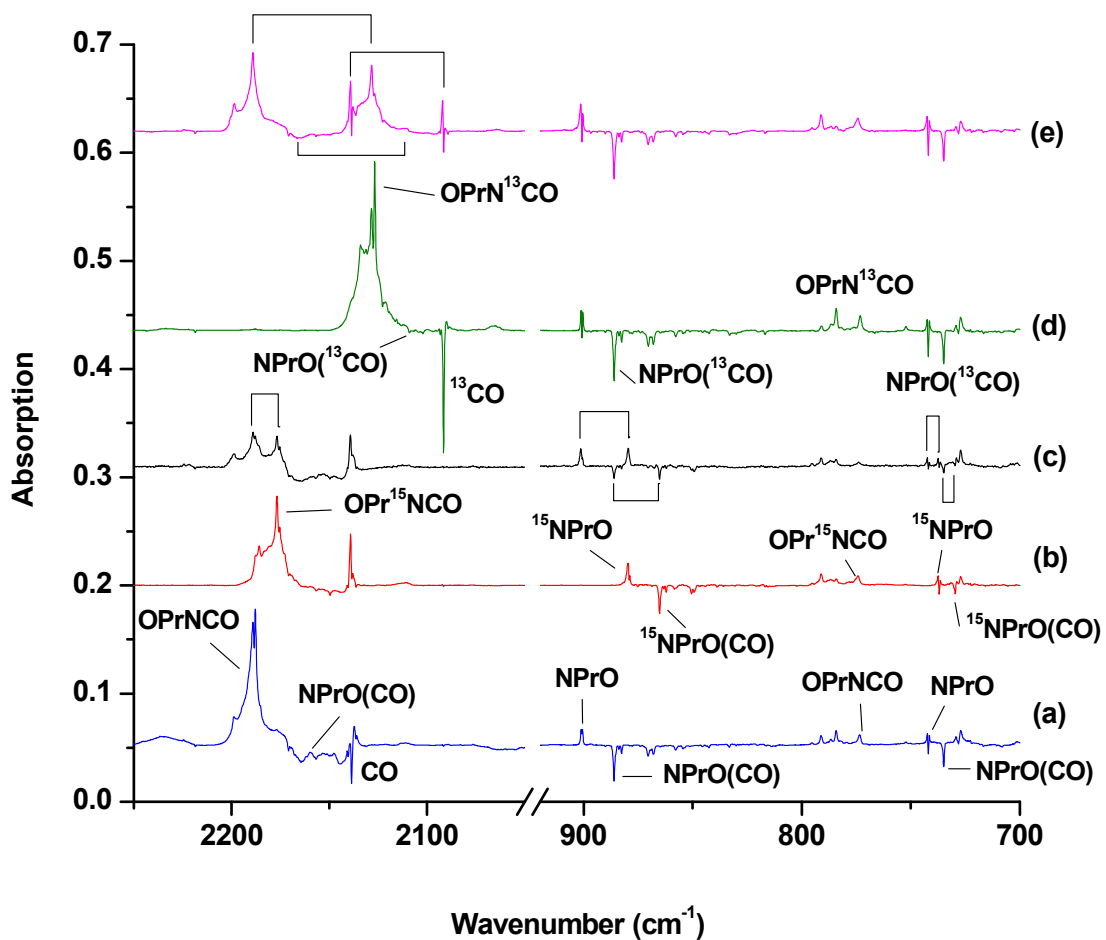


Fig S1. Difference infrared spectra in the 2250-2150 and 920-700 cm^{-1} regions from co-deposition of Pr atoms with isotopic-labeled NO and CO in excess argon (spectrum recorded after 15 min of UV light irradiation minus spectrum recorded after 30 K annealing). (a) 0.05 % NO + 0.05 % CO, (b) 0.05 % ^{15}NO + 0.05 % CO, (c) 0.05 % NO + 0.05 % ^{15}NO + 0.05 % CO, (d) 0.05 % NO + 0.05 % ^{13}CO , and (e) 0.05 % NO + 0.05 % ^{12}CO + 0.05 % ^{13}CO .

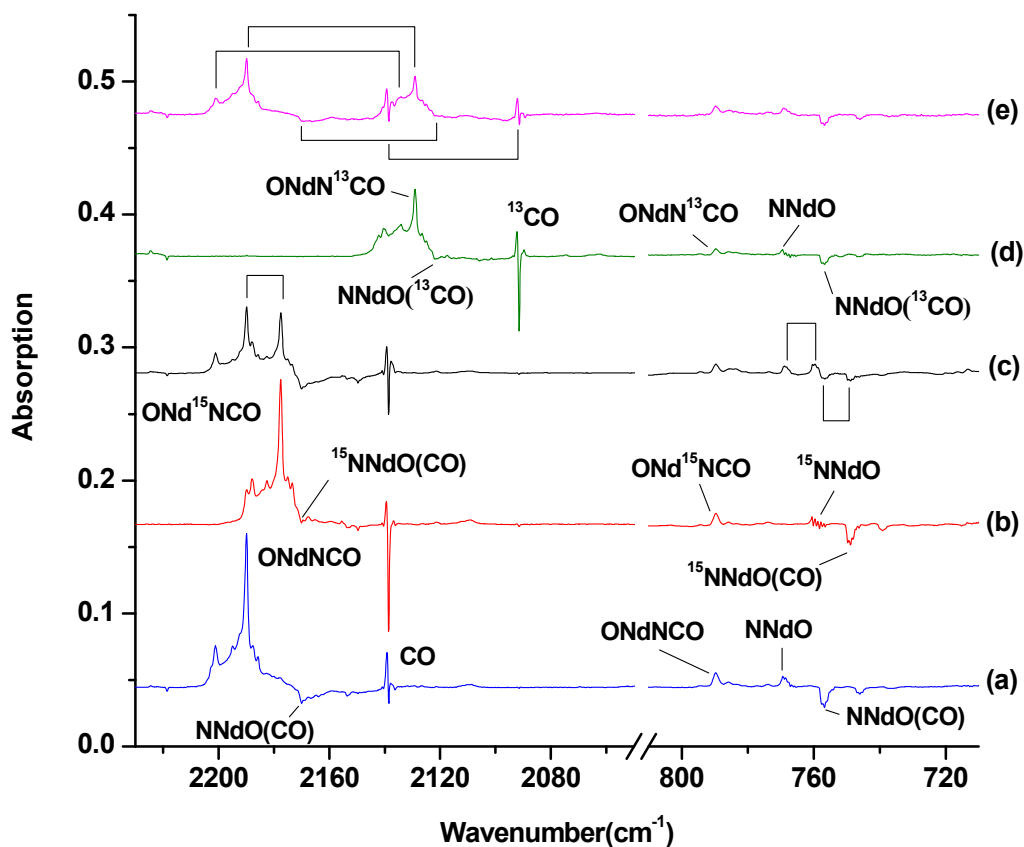


Figure S2. Difference infrared spectra in the 2230-2050 and 810-710 cm^{-1} regions from co-deposition of Nd atoms with isotopic-labeled NO and CO in excess argon (spectrum recorded after 15 min of UV light irradiation minus spectrum recorded after 30 K annealing). (a) 0.05 % NO + 0.05 % CO, (b) 0.05 % ^{15}NO + 0.05 % CO, (c) 0.05 % NO + 0.05 % ^{15}NO + 0.05 % CO, (d) 0.05 % NO + 0.05 % ^{13}CO , and (e) 0.05 % NO + 0.05 % ^{12}CO + 0.05 % ^{13}CO .