

Infrared Spectroscopy and Photochemistry of Anthracoronene in Cosmic Water-Ice

Julie M. Korsmeyer,^{*,§,¶} Alessandra Ricca,^{§,#} Gustavo A. Cruz-Diaz,^{§,Δ} Joseph E.
Roser,^{§,#} and Andrew L. Mattioda[§]

[§]NASA Ames Research Center, Mail Stop 245-6, Moffett Field, CA 94035-1000 USA

[¶]Department of Chemistry, University of Chicago, 5735 S. Ellis Ave., Chicago, IL 60627 USA

[#]Carl Sagan Center, SETI Institute, 399 Bernardo Ave., Suite 200, Mountain View, CA 94043 USA

^ΔBAER Institute, P.O. Box 25, Moffett Field, CA 94035-1000 USA

*E-mail: jkorsmeyer@uchicago.edu

Supporting Information:

The full MIR spectra for unirradiated and irradiated AntCor:H₂O samples, at all concentrations.

Figure S1 on page S2

Figure S2 on page S3

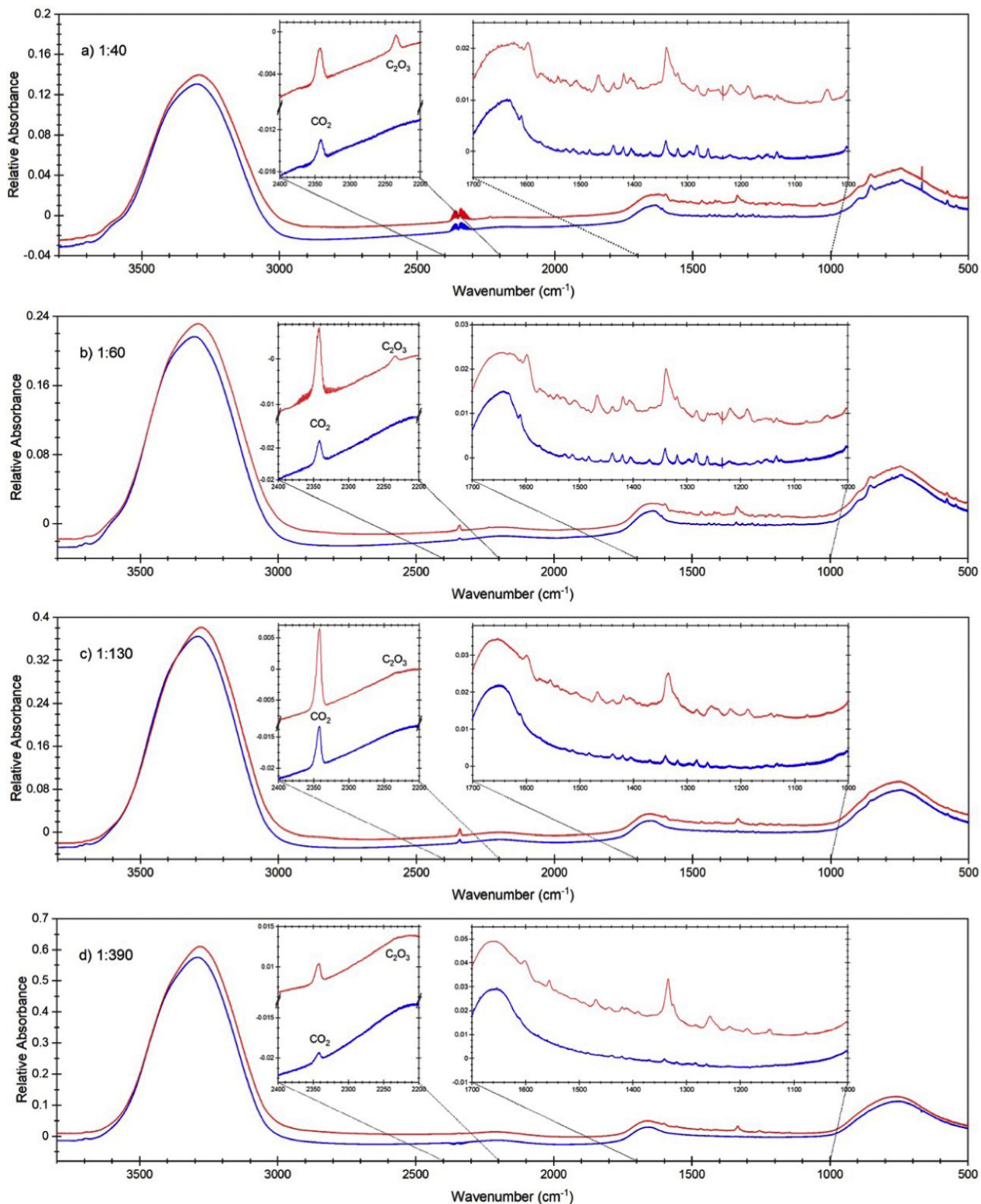


Figure S1: The full MIR spectra for unaltered unirradiated (blue) and irradiated (red) AntCor:H₂O samples, at concentrations a) 1:40, b) 1:60, c) 1:130, d) 1:390. The spectra for the unirradiated and irradiated have been offset by 0.01 absorbance units for presentation purposes. The spectra depicted are unaltered, except for the subtraction of air or “purge” bands. Each panel includes inserts for the 2400-2200 cm⁻¹ and 1700-1000 cm⁻¹ regions to show a more detailed view of the CO₂ and C₃O₂ bands and the AntCor photoproduct bands, respectively.

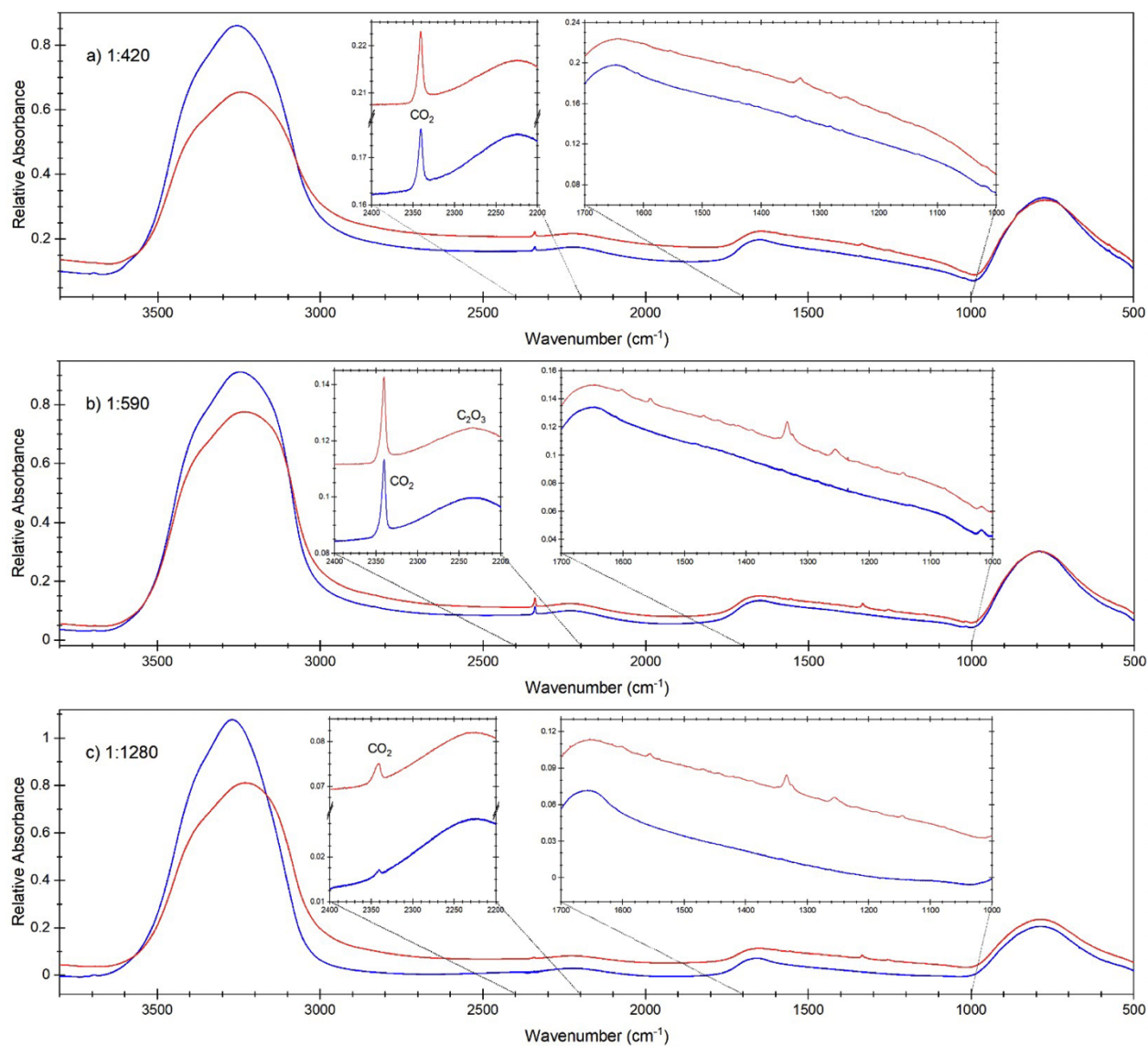


Figure S2: The full MIR spectra for unirradiated (blue) and irradiated (red) AntCor:H₂O samples, at concentrations a) 1:420, b) 1:590, c) 1:1280. The spectra for the unirradiated and irradiated have been offset by 0.01 absorbance units for presentation purposes. The spectra depicted are unaltered, except for the subtraction of air or “purge” bands. Each panel includes inserts for the 2400-2200 cm⁻¹ and 1700-1000 cm⁻¹ regions to show a more detailed view of the CO₂ and C₃O₂ bands and the AntCor photoproduct bands, respectively.