

## MS31-P09 | WAVELENGTH-SELECTIVE PHOTOISOMERISATION OF NO AND NO<sub>2</sub> LIGANDS

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In the last few years we have studied a number of complexes containing the photoswitchable ligands NO and NO<sub>2</sub> [1-4]. On the examples of [RuX(NO)<sub>2</sub>(PR<sub>3</sub>)<sub>2</sub>]BF<sub>4</sub> (PR<sub>3</sub> = PPh<sub>3</sub>, PCyp<sub>3</sub>, Pcy<sub>3</sub>; X=Cl, Br, I) and [Rh(NO)(NO<sub>2</sub>)<sub>2</sub>(Bu<sup>t</sup><sub>2</sub>PH)<sub>2</sub>] we will demonstrate how the combination of photocrystallography and infrared spectroscopy allows for structural characterization of the photoinduced linkage isomers (PLI) as well as deducing a general scheme for their generation. Furthermore, we will discuss the possibility of selectively addressing one or the other ligand for generation of a NO or NO<sub>2</sub> linkage isomer by choosing appropriate excitation wavelengths.

[1] Casaretto, N., Pillet, S., Bendeif, E.-E., Schaniel, D., Gallien, A.K.E., Klüfers, P. & Woike, T. (2015). IUCrJ, 2, 35-44.

[2] Casaretto, N., Pillet, S., Bendeif, E.-E., Schaniel, D., Gallien, A.K.E., Klüfers, P. & Woike, T. (2015). Acta Crystallographica, B71, 788-797.

[3] Casaretto, N., Fournier, B., Pillet, S., Bendeif, E.-E., Schaniel, D., Gallien, A.K.E., Klüfers, P. & Woike, T. (2016). CrystEngComm, 18, 7260-7268.

[4] Schaniel, D., Bendeif, E.-E., Woike, T., Böttcher, H.-C., Pillet, S. (2018). CrystEngComm, 20, 7100-7108.