NITROUS OXIDE IS NOTHING TO LAUGH ABOUT: $Au_2N_2O^+$

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Nitrous Oxide is the third largest contributor to the greenhouse effect having a potency 300 times that of CO_2. Furthermore it is a metastable molecule that can be catalytically converted into harmless nitrogen and oxygen gas. Gold is an interesting candidate because small metal clusters could provide reaction pathways to enable this activation. Therefore we study the simple system $Au_2N_2O^+$. In this talk we will present the measured vibrationally-resolved optical photodissociation spectrum and compare the results to quantum-chemical calculations of different isomers and bare Au_2^+[1].

[1] M. Förstel et al., Angew. Chem. Int. Ed., 2020, 123, 21587-21592.