Supporting Information for

Nonadiabatic Dynamics in the Photodissociation of *cis*-HONO($\tilde{A}^1A''$, 2_0^2)

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Table S1. Peak positions and peak widths in TKER of OH($\tilde{X}^2\Pi$, F_1, υ = 0, *J*) products from photodissociation of *cis*- and *trans*-HONO(2_0^2) (All values are in cm^{-1}. pos = peak position; width = peak width (FWHM); OH(e/f) denotes the Λ-doublet components of OH.)

Conformer	*J*	NO(υ=1), OH(e)		NO(υ=2), OH(e)		NO(υ=1), OH(f)		NO(υ=2), OH(f)	
		pos	width	pos	width	pos	width	pos	width
trans-HONO(2_0^2)^1	1.5	8972	1231	6946	1293	8539	1353	6729	1200
	2.5	8920	1324	7086	1354	8844	1238	7021	1699
	3.5	8385	1217	6681	1424	8404	1393	6793	1352
cis-HONO(2_0^2)	1.5	8788	1429	7072	1451	8603	1450	6844	1400
	2.5	8391	1495	6680	1274	8676	1454	7010	1478
	3.5	8343	1300	6568	1300	8550	1390	6901	1350

Table S2. Vibrational branching ratios and anisotropy parameters of NO ($\tilde{X}^2\Pi$, υ) products from photodissociation of *cis*- and *trans*-HONO(2_0^2) (br = branching ratio; aniso = anisotropy parameter; OH(e/f) denotes the Λ-doublet components of the OH product.)

Conformer	*J*	NO(υ=1), OH(e)		NO(υ=2), OH(e)		NO(υ=1), OH(f)		NO(υ=2), OH(f)	
		br	aniso	br	aniso	br	aniso	br	aniso
trans-HONO(2_0^2)^1	1.5	0.43	-0.53	0.57	-0.51	0.62	-0.73	0.38	-0.66
	2.5	0.54	-0.60	0.46	-0.53	0.42	-0.78	0.58	-0.70
	3.5	0.63	-0.81	0.37	-0.67	0.60	-0.70	0.40	-0.61
cis-HONO(2_0^2)	1.5	0.36	-0.84	0.64	-0.76	0.50	-0.73	0.50	-0.63
	2.5	0.43	-0.82	0.57	-0.75	0.38	-0.83	0.62	-0.73
	3.5	0.45	-0.83	0.55	-0.76	0.49	-0.77	0.51	-0.67

References

1 Z. Lu, S. Hou, P. Wang, Y. Zhang, S. Li, F. Wu, F. Li, R. Guo, D. Yuan, C. Xie, K. Yuan, D. H. Parker, X. Yang and X. Wang, *JACS Au*, 2026, **6**, 1860-1867.