Supporting Information

Table S1. Second-order elastic constants (GPa), piezoelectric components (C m^{-2}) and dielectric components (dimensionless) of wurtzite-2H, calculated at different pressures (GPa) and related properties: bulk modulus (Voigt, Reuss and VRH, GPa), shear modulus (Voigt, Reuss and VRH, GPa), Young's moduli (VRH, GPa), Poisson's ratio, Pugh ratio k, Vickers hardness H_v (GPa) and wave velocities (primary and secondary, km s^{-1}). Density values (ρ, kg m^{-3}) are also reported.

	Pressure (GPa)										
	22.05	*17.15*	*12.49*	*8.49*	*5.05*	*1.77*	*0.43*	*-0.51*	*-2.75*	*-4.69*	*-6.37*
C_{11}	176.22	165.85	154.72	144.02	134.05	123.56	119.10	115.64	107.20	99.20	91.35
C_{12}	137.54	119.81	102.32	87.05	73.30	61.34	55.81	52.02	42.48	34.71	27.87
C_{13}	126.66	107.96	90.65	75.65	62.38	49.29	44.35	40.81	32.83	26.26	20.77
C_{33}	212.92	196.69	181.05	168.05	155.16	142.83	136.67	132.32	121.34	110.75	100.57
C_{44}	17.04	20.33	23.10	25.17	26.71	27.73	28.09	28.26	28.57	28.48	28.45
e_{33}	0.719	0.664	0.589	0.508	0.416	0.303	0.246	0.202	0.076	-0.064	-0.221
e_{31}	-0.405	-0.375	-0.335	-0.289	-0.240	-0.184	-0.155	-0.131	-0.068	0.002	0.078
e_{15}	-0.353	-0.318	-0.280	-0.241	-0.196	-0.143	-0.117	-0.097	-0.042	0.016	0.086
ε_{11}	4.264	4.253	4.243	4.234	4.235	4.241	4.245	4.250	4.263	4.281	4.303
ε_{33}	4.349	4.318	4.299	4.280	4.273	4.271	4.273	4.275	4.283	4.296	4.312
ρ	4541	4393	4239	4091	3950	3801	3735	3686	3563	3445	3333
K_V	134.97	121.88	109.20	97.98	87.68	77.68	73.49	70.44	63.17	56.86	51.14
μ_V	33.34	34.15	34.52	34.53	34.30	33.53	33.14	32.74	31.70	30.29	28.80
K_R	134.48	121.62	109.03	97.86	87.59	77.64	73.46	70.41	63.15	56.85	51.14
μ_R	31.80	32.76	33.28	33.38	33.25	32.48	32.15	31.80	30.90	29.62	28.30
K_{VRH}	134.73	121.75	109.11	97.92	87.64	77.66	73.47	70.43	63.16	56.85	51.14
μ_{VRH}	32.57	33.46	33.90	33.95	33.77	33.01	32.64	32.27	31.30	29.96	28.55
E_{VRH}	90.42	91.95	92.15	91.30	89.78	86.73	85.30	83.98	80.58	76.44	72.21
υ_{VRH}	0.388	0.374	0.359	0.345	0.329	0.314	0.306	0.301	0.287	0.276	0.265
k	0.24	0.27	0.31	0.35	0.39	0.43	0.44	0.46	0.50	0.53	0.56
H_v	-0.09	0.44	1.00	1.55	2.14	2.68	2.95	3.12	3.59	3.91	4.18
v_p	2.678	2.760	2.828	2.881	2.924	2.947	2.956	2.959	2.964	2.949	2.927
v_s	6.836	6.676	6.505	6.341	6.175	5.994	5.913	5.851	5.694	5.541	5.387