

Supplementary Information

Chemical Vapor Deposition and Phase Stability of Pyrite on SiO₂

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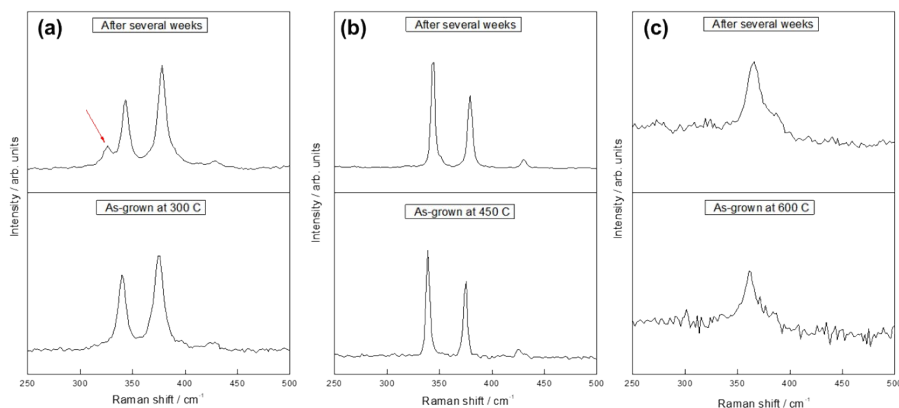


Figure S1. Air stability of pyrite crystals. Raman spectra comparison of the crystals grown at 300 C (a), 450 C (b), and 600 C (c) before and after exposed to air for several weeks.

Table S1. The shift (cm⁻¹), height (a.u.), and full width at half maximum (FWHM; cm⁻¹) values of the pyrite Raman peaks with changing laser power (mW).

Laser Power		5	15	25	35
Si	Shift	523.74	523.70	523.75	523.681
	Height	74.47	212.63	333.91	462.13
	FWHM	9.89	8.80	9.04	8.77901
T_g⁽³⁾	Shift	430.46	427.99	425.29	420.952
	Height	13.75	37.03	47.68	47.8972
	FWHM	7.6939	5.79	7.67	9.44458
A_g	Shift	378.86	376.65	374.12	370.622
	Height	157.30	472.93	825.98	1108.87
	FWHM	4.52	4.27	4.61	5.56911
E_g	Shift	343.02	341.64	340.00	337.836
	Height	211.05	553.48	949.32	1256.3
	FWHM	4.44	4.65	4.67	4.94073