



Figure S1 . Hydrothermal product of VO₂ versus hydrothermal temperature and reaction time

Table S1. the crystallography information of VO₂ polymorphs.

Polymorphs	Unit cell parameters a,b,c (Å)	$\beta(^{\circ})$	Space group
VO ₂ (B)	12.054,3.693,6.424	106.96	C2/m
VO ₂ (A)	8.450,8.450,7.678	90	P4 ₂ /ncm
VO ₂ (M)	5.752,4.538,5.383	122.64	P2 ₁ /c
VO ₂ (R)	4.554,4.554,2.856	90	P4 ₂ /mnm
VO ₂ (D)	4.597,5.684,4.913	89.39	P2/c
VO ₂ (P)	4.890,9.390,2.930	90	Pbnm