

Supporting information

Fig.S1. Simulated XRD for LT and HT SrMgF₄ phases

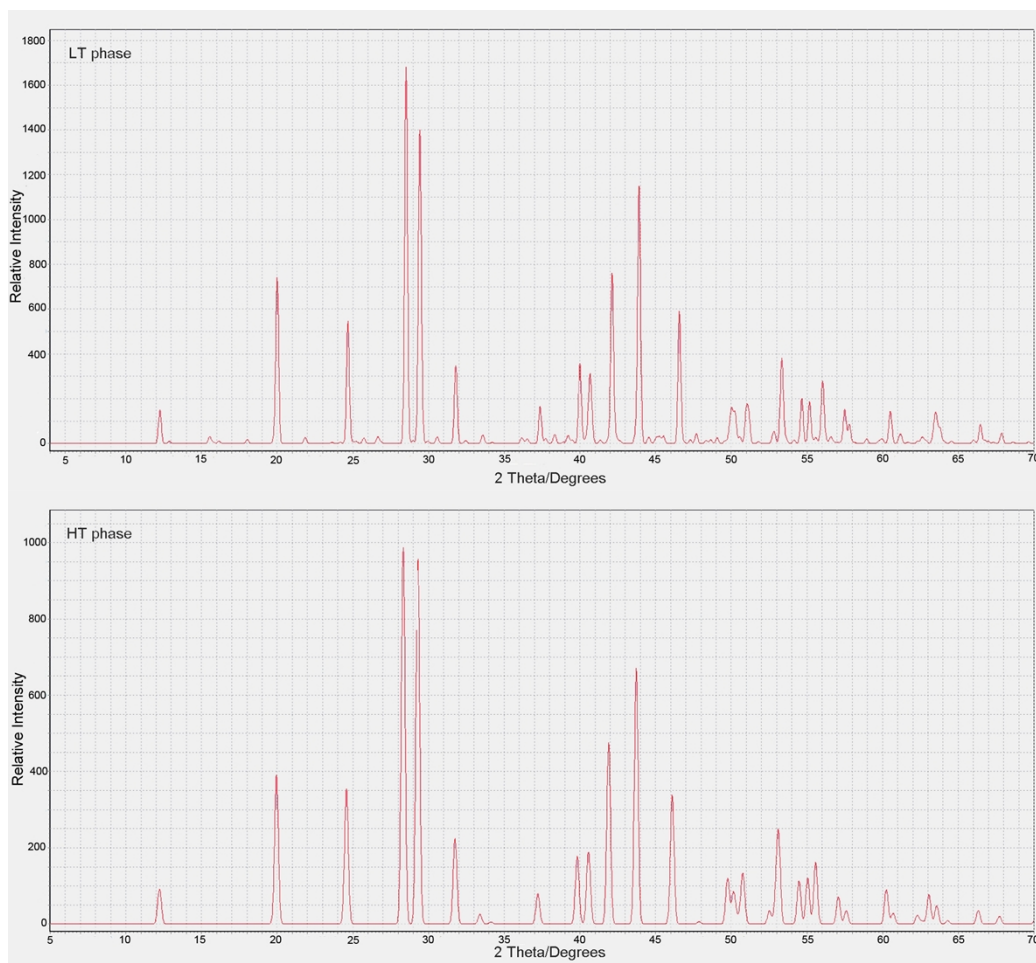


Table S1 . Main optical properties for wide-band nonlinear crystals

№	Crystal	Transmission range, μm	SHG coefficients, pm/V	Birefringence Δn
1	β -BaB ₂ O ₄ (BBO)	0.189-3.5	$\chi_{22}(0.53\mu\text{m})=2.6\text{pm/V}$ $\chi_{15}(1.06)=0.03, \chi_{31}=d_{33}=0.04$	0.12
2	LiB ₃ O ₅ (LBO)	0.155-3.2	$\chi_{31}(1.06)=0.67, \chi_{32}=0.85, \chi_{33}=0.04$	0.05
3	KH ₂ PO ₄ (KDP)	0.176-1.55	$\chi_{36}(1.06)=0.38$	0.05
4	NH ₄ H ₂ PO ₄ (ADP)	0.184-1.3	$\chi_{36}(1.06)=0.46$	0.05
5	KD ₂ PO ₄ (DKDP)	0.2-2.15	$\chi_{36}(1.06)=0.36$	0.05
6	CsLiB ₆ O ₁₀ (CLBO)	0.18-2.75	$\chi_{36}(1.06)=0.74$	0.06
7	BiB ₃ O ₆ (BIBO)	0.27-2.7	$\chi_{14}(1.079)=2.4, \chi_{16}(1.079)=2.8$ $\chi_{22}(1.079)=2.53, \chi_{36}(1.079)=2.4$	0.16
8	K ₂ Al ₂ B ₂ O ₇ (KABO)	0.18-3.6	$\chi_{11}(1.064)=0.45$	0.07
9	KBeBO ₃ F ₂ (KBBF)	0.155-3.7	$\chi_{11}(1.064)=0.49$	0.075
10	BaAlBO ₃ F ₂ (BABF)	0.165-1.6	$\chi \sim 2d(\text{KDP})$	0.05
11	La ₂ CaB ₁₀ O ₁₉ (LCB)	0.185-3.0	$d \sim 1.05$	
12	GdCa ₄ O(BO ₃) ₃ (GCOB)	0.2-3.2	$\chi_{32}(1.064)=2.23$	0.03
13	YCa ₄ O(BO ₃) ₃ (YCOB)	0.202-2.5	$\chi_{13}(1.064)=0.71, \chi_{32}(1.064)=2.00$	
14	Li ₂ B ₄ O ₇ (LB4)	0.16-3.5	$\chi_{31}(1.064)=0.12, \chi_{33}(1.064)=0.47$	0.05
15	LiRbB ₄ O ₇	0.187-3.47	$\chi_{14}(1.064)=0.45$	0.03
16	BaMgF ₄	0.125-13	$\chi_{31}=0.021, \chi_{32}=0.039, \chi_{33}=0.015$	0.02

Transparency range at “0” transmittance level.

All data were taken from¹¹ besides those for BaMgF₄³.