

## Supplementary

**Table S1.** GaSe:S refractive index for ordinary wave at the wavelength of 1547 nm.

	This work	Kato	Allakhverdiev 1982	Abdullaev 1975	Takaoka	Vodopya nov	Abdullaev 1972	Allakhver diev 2005	McMath & Irwin
		[65]	[78]	[77]	[44]	[45]	[79]	[80]	[82]
Method of measurement									
	ATR (Metricon)		Brewster angles and Conoscopic pattern angles (0.63, 1.15, and 3.39 $\mu\text{m}$ ); IR interference.	Brewster angles (0.63, 1.15, and 3.39 $\mu\text{m}$ ); NLO mixing.	NLO mixing	NLO mixing	Not stated. Brewster angles (0.63, 1.15, and 3.39 $\mu\text{m}$ )	Minimum deviation method	Minimum deviation; IR interference;
Crystal growth method									
	Bridgman	Not stated	Not stated	Bridgman- Strockbarger	Not stated	Not stated	Bridgman- Strockbarg er	Bridgman	Bridgman
x	Refractive index for the ordinary wave								

0	2.75	2.758		2.871	2.78	2.759	2.746	2.75	2.767
0.03	2.744	2.753							
0.12	2.733	2.739							
0.16	2.713	2.733							
0.2			2.839						
0.22	2.703	2.723							
0.6			2.723						
0.8			2.626						