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Material	frequency (cm ⁻¹) for max. value of $\Im m(S)$	frequency (cm ⁻¹) for min. value of $\Re e(S)$	frequency (cm ⁻¹) for max. value of $\Re e(S)$	max. value of $\Im m(S)$	max. value of $\Re e(S)$	min. value of $\Re e(S)$	$r_a(\omega_0)$ for				References
							10000 cm ⁻¹	2500 cm ⁻¹	1000 cm ⁻¹	500 cm ⁻¹	
AgBr	125.5	113	138	1	1.17	0.167	0.64 0.58	0.65 0.63	0.66 0.65	0.67 0.67	III-553
AgCl	184	170.6	197	1.12	1.22	0.001	0.60 0.55	0.61 0.60	0.63 0.62	0.65 0.65	III-553
AgGaS₂	237	225	249	0.46	1.03	0.58					III-573
AgGaSe₂	270	261	270	1.48	1.4	-0.22					III-573
AgI	116	97	135	0.256	0.81	0.55	0.66	0.66	0.67	0.67	III-553 ^(a)
AgI (data)	113	104	124	0.49	0.83	0.31					III-553 ^(b)
Al₂O₃	820	810	830	11.48	6.35	-5.17	0.53 0.50	0.58 0.58	0.64 0.64	0.70 0.70	II-761, III-653, [11-13]
AlAs	397	393	401	1.84	1.71	-0.13	0.78	0.79	0.79	0.80	II-489
Al_xGa_{1-x}As_{x=0.3}	277	274	280	0.56	1.11	0.57	0.82	0.82	0.83	0.83	II-513
Al_xGa_{1-x}As_{x=0.3}	377	372	382	0.68	1.12	0.44	0.82	0.82	0.83	0.83	II-513
ALON	850	814	956	1.89	1.45	-0.37	0.54	0.59	0.65	0.70	II-777
AlSb	337.7	336	338.7	3.57	2.07	-0.52	0.82	0.82	0.82	0.82	II-501, [14,15]
As₂S₃-fused	354	317.5	377.4	0.37	0.94	0.49					I-641
As₂Se₃-bi	234.9	229.8	240	0.5	1.07	0.56					I-623

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As₂Se₃-fused	232	220.1	268.7	0.23	0.92	0.67						I-623
BaF₂	333	312	350	3.83	2.41	-1.71	0.38	0.41	0.46	0.52		III-683 ^(c) , [16,17]
BaMg_{1/3}Nb_{2/3}O₃	441	418	450	1.84	1.93	-0.23	0.63	0.65	0.70	0.74		[18]
BaMg_{1/3}Nb_{2/3}O₃	708	683	721	1.71	1.26	-0.33	0.63	0.65	0.70	0.74		[18]
BN-cubic	1292	1272	1312	3.72	2.53	-1.2	0.65	0.67	0.70	0.72		III-425
BaTiO₃ -bi	463	459.5	466	2.32	2.29	0.21	0.70	0.75	0.81	0.86		II-789 ,[19]
BaTiO₃ -bi	665	641	685	3.78	2.28	-1.51	0.63	0.73	0.80	0.86		II-789, [19]
BeO-bi	1013	1007	1020	21.26	11.28	-10.11	0.52	0.57	0.63	0.67		II-805
BeO-ceramics.	1007	985	1022	6.79	3.56	-2.92						II-805
Bi₁₂GeO₂₀	365	345	375	1.19	1.92	0.01						III-403
Bi₁₂GeO₂₀	490	480	495	1.11	1.33	0.05						III-403
Bi₁₂GeO₂₀	545	538	550	1.59	1.27	-0.92						III-403
Bi₁₂GeO₂₀	695	690	700	1	1.35	-0.31						III-403
Bi₁₂SiO₂₀	357	353	366	1.74	1.49	-0.89						III-403
Bi₁₂SiO₂₀	495	491	502	1.93	1.62	-0.46						III-403
CaCO₃	362	357	373	4.55	3.26	-2.69						III-701
CaF₂	417	401	432	5.55	3.1	2.44	0.36	0.39	0.46	0.52		II-815, [16]
CaMoO₄ -bi	876	872	880	7.93	4.57	-3.34	0.59	0.62	0.65	0.69		[20]
CaWO₄ -bi	873	869	876	10.7	5.91	-4.83	0.56	0.59	0.64	0.68		[20]

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CdGeAs₂ -bi	209	204	213.5	0.14	0.96	0.82	0.88 0.80	0.88 0.86	0.88 0.87	0.88 0.88	III, p.445
CdGeAs₂ -bi	281	278	283.5	0.48	1.12	0.614	0.88 0.80	0.88 0.86	0.88 0.87	0.88 0.88	III, p.445
CdS -bi	293	291	295.2	6.69	4.1	-2.62	0.69 0.58	0.70 0.67	0.71 0.70	0.72 0.72	II, p.579
CdSe	204	202	205	4.13	3.6	-2.1					II, p.559
CdTe	166	162.5	169.3	1.73	1.63	-0.1	0.75	0.76	0.76	0.77	I, p.409
CsBr	106	94	111	2.11	1.66	-0.77					III, p.717
CsCl	150	145.1	157	3.12	2.46	-0.8					III, p.731
CsI	85	78.2	95	1.26	1.52	-0.15					II, p.853
Cu₂O	149	148.8	150	0.53	1.24	0.33					II, p.875
CuGaS₂ -bi	381	379	382	2.99	2.38	-0.46	0.72 0.63	0.73 0.71	0.74 0.73	0.74 0.74	III, p.459
FeS₂	437.8	435	441	1.06	1.43	0.38	0.91 0.74	0.91 0.88	0.91 0.90	0.92 0.91	III, p.507
GaAs	290	289	291.5	2.95	2.28	-0.6	0.83 0.75	0.84 0.82	0.84 0.83	0.84 0.84	I-409, [21] ^(d)
GaP	399.5	398	402.5	5.37	2.86	-1.3	0.74 0.67	0.75 0.73	0.75 0.75	0.76 0.76	I-445, III-38, [22]
GaSb	240.4	239	248	1.41	1.52	0.11	0.83	0.83	0.84	0.84	II- 597
GaSe -bi	245	244	255	1.67	1.82	-0.03	0.74	0.76	0.77	0.78	III-473
HAFNIA	642	603	684	1.72	1.45	-0.21	0.63	0.67	0.72	0.76	[23]
HgCdTe	163	162	166	0.94	1.3	0.39	0.88	0.88	0.89	0.89	II-665
InAs	238	236	240	1.53	1.61	0.083	0.84 0.74	0.84 0.82	0.85 0.84	0.85 0.85	I-479
InP	341	339	343	3.85	2.73	-1.1	0.81 0.71	0.82 0.79	0.82 0.81	0.83 0.82	I-503

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InSb	73	68	78.5	0.71	1.28	0.57	0.88 0.77	0.88 0.86	0.89 0.88	0.90 0.89	I-491 ^(e)
InSb	192	190	193.5	1.13	1.44	0.31	0.88 0.77	0.88 0.86	0.89 0.88	0.90 0.89	I-491 ^(e)
KBr	142	138	150	2.51	2.2	-0.45					II-989
KCl	181	172	194	3.22	2.44	-0.8					I,-703
KI	122	119	128	2.26	2.02	-0.13	0.46 0.42	0.47 0.46	0.49 0.48	0.51 0.50	III-807 ^(f) , [24]
Li₂CaHfF₈ -bi	522	505	539	3.68	2.11	-1.46	0.42	0.45	0.50	0.56	[25]
LiF	576	557	592	7.1	3.48	-3.46	0.35 0.33	0.41 0.41	0.50 0.49	0.57 0.57	I-675, [26]
LiIO₃ -bi	434	417	451	2.19	1.69	-0.5	0.51	0.54	0.58	0.62	[27]
LiIO₃ -bi	818	814	821	3.75	2.58	-0.83	0.51	0.54	0.58	0.62	[27]
LiNbO₃ -bi	828	812	844	4.71	3.01	-1.67	0.67	0.71	0.76	0.81	[28]
LiTaO₃ -bi	808	798	819	7.37	4.2	-3.1	0.66 0.61	0.70 0.69	0.76 0.75	0.81 0.80	[29]
MgAl₂O₄-spinel	793	774	832	3.53	2.5	-1.16	0.53	0.58	0.63	0.68	II-883
MgF₂-bi	556	541.5	571	6.28	3.68	-2.97	0.33 0.31	0.37 0.36	0.43 0.43	0.49 0.49	II-899, [30]
MgO	661	628	679	5.94	3.66	-3	0.51 0.48	0.56 0.55	0.62 0.62	0.68 0.67	II-919, [26]
NaCl	222	217	228	3.46	2.7	-0.51					I-775
NaF	365	338	390	6	3.39	-1.84					II-1021
NaNO₃-bi	89	85.5	98	1	0.88	0.1	0.36	0.38	0.40	0.43	III-871
NaNO₃-bi	245	234	258	1.85	1.48	-0.353	0.36	0.38	0.40	0.43	III,871
PbS	207	202	214	1.33	1.61	0.19					I-525

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PbSe	220	200	240	0.54	1.2	0.67						I-517
Pb_{1-x}Sn_xTe x=0.21	120.5	114	126	0.46	1.19	0.73	0.95	0.96	0.96	0.96		II-637
PbTe	252	240	263.5	0.67	1.29	0.621	0.94	0.95	0.95	0.96		I-535
PbWO₄ -bi	849	842	856	4.12	2.1	-1.76	0.58	0.61	0.64	0.68		[31]
PbZrO₃	378	361	389	1.17	1.31	0.28	0.67	0.71	0.76	0.81		[32]
PbZrO₃	621.5	595.5	648	1.69	1.44	-0.23	0.67	0.71	0.76	0.81		[32]
RbBr	112	106	117	1.88	1.79	-0.36						III-845
RbI	93	90	97	2.38	2.26	-0.18						III-857
Se -bi	104	100	107.5	0.06	0.84	0.78						II-691
Se -bi	143	138.5	147	0.1	0.84	0.75						II-691
(N-doped) Si	267	151.5	380	0.23	1.01	0.76						I-547
SiC-hexagonal	948	945.5	950.5	15.53	8.52	-7	0.75	0.76	0.78	0.79		I-587
							0.69	0.75	0.77	0.79		
SiO₂-bi	1180	1177	1184	16.2	8.09	-7.94	0.39	0.45	0.50	0.54		I-719, [27]
							0.37	0.45	0.50	0.54		
Silica	494	485	510	1.33	1.35	0.04	0.36	0.42	0.47	0.51		I-749 ^(g)
							0.34	0.41	0.46	0.51		
Silica	1165	1133	1235	2.05	1.93	-0.86	0.36	0.42	0.47	0.51		I-749 ^(g)
							0.34	0.41	0.46	0.51		
SrF₂	335	325.5	343	7.03	4.6	-3.28	0.36	0.39	0.44	0.50		III-883, [16]
							0.35	0.39	0.44	0.50		
SrTiO₃	462	460	470	3.84	5.62	-1.13	0.70	0.75	0.81	0.86		II-1035, [33]
							0.70	0.75	0.81	0.86		
SrTiO₃	736	720	748	6.76	3.96	-3.16	0.70	0.75	0.81	0.86		II-1035, [33]
							0.70	0.75	0.81	0.86		
Te -bi	104	96	106	0.19	1.04	0.8	0.94	0.94	0.94	0.95		II-709
							0.82	0.92	0.93	0.94		

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TeO₂ -bi	374	371	377.5	1.69	2.01	0.64	0.70	0.73	0.77	0.80	[34]
TeO₂ -bi	716	709.5	725	2.14	2.2	0.46	0.70	0.73	0.77	0.80	[34]
TeO₂ -bi	775	767	811	1.17	0.68	-0.25	0.70	0.73	0.77	0.80	[34]
TiO₂ -bi	764	743	785	3.54	2.55	-0.9	0.76	0.80	0.85	0.89	[35]
TlBr -bi	108	101	116	1.86	1.79	-0.07					III-923
TlBr -bi	107.5	96	114	1.6	1.47	-0.2					III-923
TlCl	159	153	166	2.8	2.31	-0.66					III-923
TlClBr (KRS6)	139	123	159	1.13	1.43	0.29					III-923
TlI	87.5	82	97.5	1.42	1.75	0.13					III-923
Y₂O₃ (yttria)	526	521	530	6.11	4.48	-1.43	0.58	0.61	0.66	0.70	II-1079
Y₂O₃ (yttria)	586	581	591	8.27	3.99	-4.14	0.58	0.61	0.66	0.70	II-1079
YAG	540	535	545	3.1	2.4	-0.22	0.56	0.60	0.65	0.69	III-963 ^(h) [36-39]
YAG	576	572	581	2.03	1.3	-0.52	0.52	0.59	0.65	0.69	III-963 ^(h) [36-39]
YAG	823.5	815	832	5.6	2.62	-2.3	0.56	0.60	0.65	0.69	III-963 ^(h) [36-39]
YGG	470	466	473	3.54	2.93	-0.34	0.57	0.60	0.65	0.69	[38]
YGG	491	488	495	3.95	2.29	-1.44	0.57	0.60	0.65	0.69	[38]
YGG	673.5	668	678.5	3.87	3	-0.33	0.57	0.60	0.65	0.69	[38]
YGG	700.5	695.5	706	4.36	1.6	-2.3	0.57	0.60	0.65	0.69	[38]
YIG	428	422	435	2.98	2.4	-0.56	0.67	0.70	0.74	0.78	[38]
YIG	690	681	699.5	3.66	2.31	-1.28	0.67	0.70	0.74	0.78	[38]

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ZnGeP₂ -bi	402	401	411	0.78	1.2	0.44	0.82 0.70	0.82 0.79	0.82 0.81	0.83 0.82	III-637
ZnN	24.5	22	27	1.39	1.62	0.28					III-351
ZnS	342.5	339	346	4.86	3.16	-1.7	0.70	0.71	0.73	0.74	I-597
ZnSe	247	243	250	3.26	2.36	-0.9	0.69 0.59	0.69 0.67	0.70 0.69	0.71 0.71	II-737
ZnTe	202	200	203.5	4.03	2.78	-1.25	0.74 0.65	0.74 0.72	0.75 0.74	0.76 0.75	II-737

- (a) the table values are obtained on the base of analytical formula for $\varepsilon(\omega)$
- (b) the table values are obtained on the base of numerical table for $n(\omega)$ and $\kappa(\omega)$ given in [6].
- (c) The (n, κ) data of [6] is derived from the Hoffman fitting curve [17], rather than from the Kaiser curve [16], because Hoffmann introduced additional terms in order to take into account the impurities and defects of the real material, one of the modes taking into account the two-photon absorption.
- (d) Note that in [6], there is a mistakes in numerical table for $n(\omega)$ and $\kappa(\omega)$ in the decimal point position - clearly visible through a plotting.
- (e) Note that in [6], there is error in the sign in the formula for ε in the denominator of second term that accounts for the free electrons.
- (f) Note that in [6], there is misprint for the value of one of the second resonance – should be $\omega_2 = 144 \text{ cm}^{-1}$ [24]
- (g) For this material all table values including $r_a(\omega_o)$ are found on the base of numerical table for $n(\omega)$ and $\kappa(\omega)$ given in [6]. For $r_a(\omega_o)$, eq. (10) has been used.
- (h) Note that in [6], there is a mixing between the references of the columns so that it does not allow a correct plot of $\Re(S)$ and $\Im(S)$ starting from the $n(\omega)$ and $\kappa(\omega)$ values.