

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks Tm
				Film	X-tal	Bulk	Prep		
FZG67	167-186			x				μ	absorption measurements
ZFG67	60-520			x				μ	absorption measurements
BBS71	1-46			x				$\text{Im}(\epsilon^{-1})$	energy loss spectroscopy
Pet72	1.5-6.2	Trans, Refl		x				T, R, σ	
Kun75	50-550			x				μ	absorption measurements with synchrotron radiation
WL75	0.2-4.4		4.2		x		EP	A; KK: σ for $E \perp c$ and $E \parallel c$	absorptivity measured by calorimetry; observed optical anisotropy
CGT76		Trans		x					energy loss spectroscopy
Kny77	0.06-4.9	Ellips	80, 293, 450			x		$n, k, \sigma, \epsilon_2 \omega$	
Liu77									review paper covering band structure, optical and photoemission properties
Tra77	24-36	Trans	vapor	x				μ	absorption measurements of metal vapor with synchrotron radiation
KN77									review paper
Lyn78									review paper

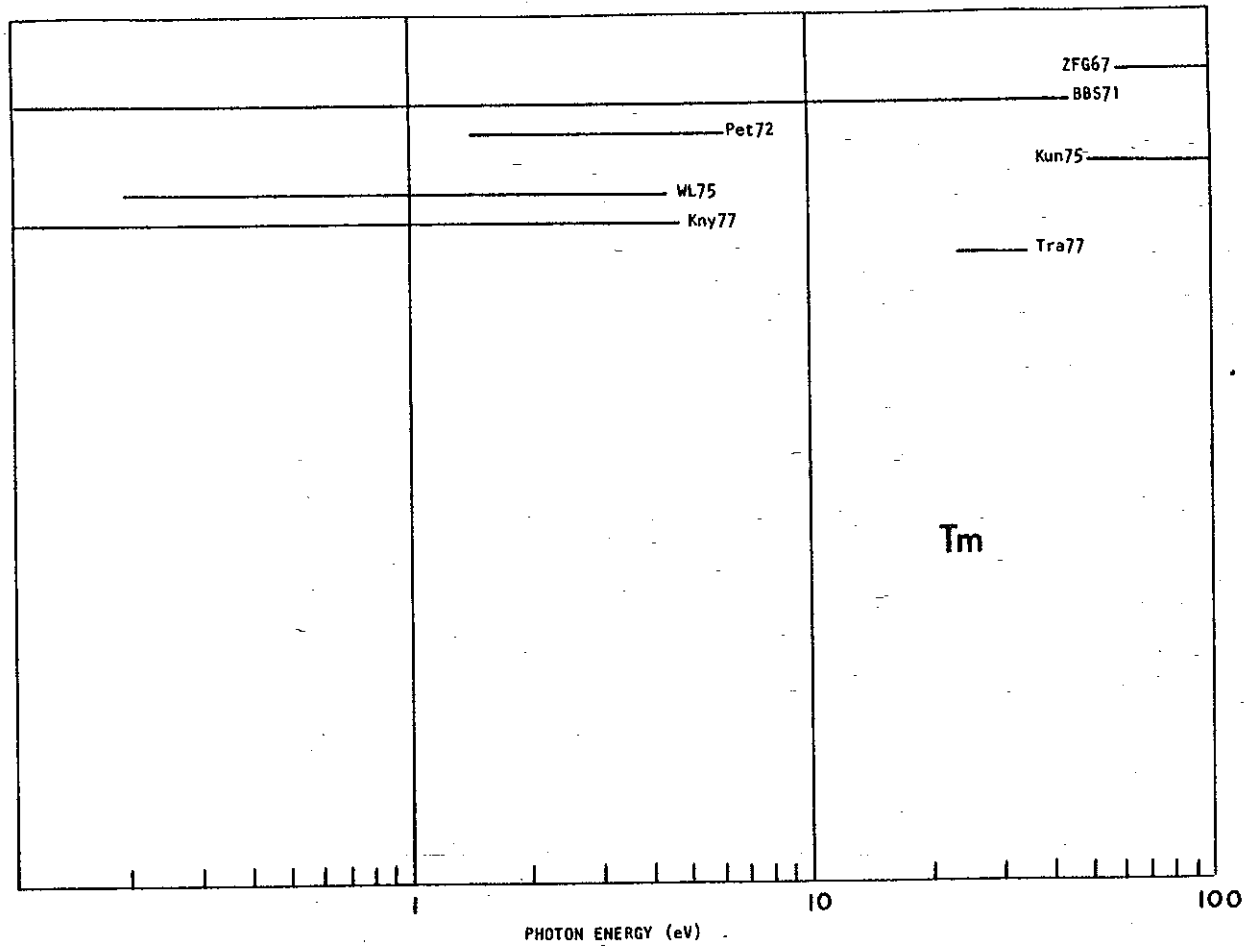


Fig. 79 Survey of available data on Tm.

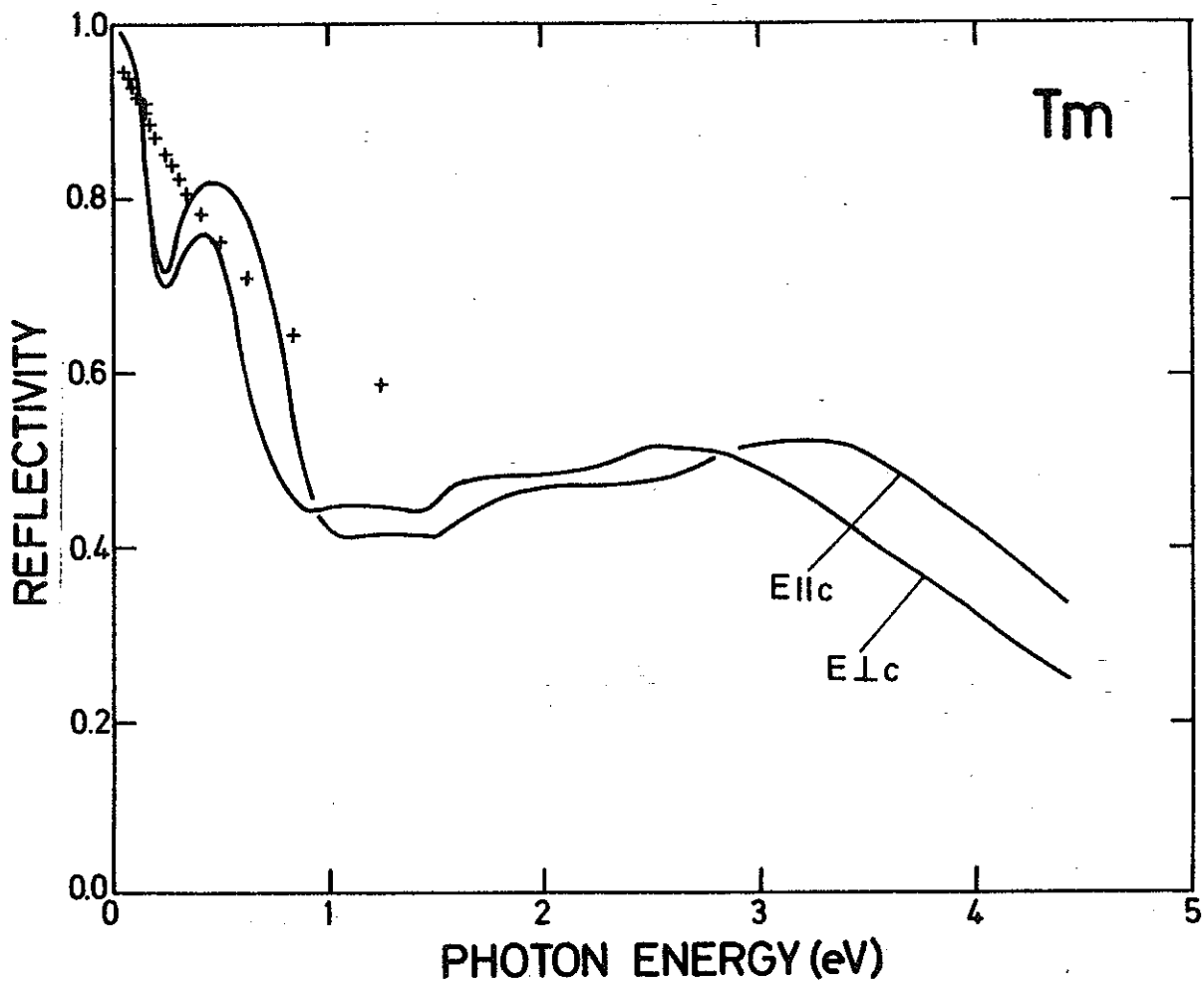


Fig. 80 Reflectivity for Tm. Single crystal results by WL75 (—) for $E_{||c}$ and $E_{\perp c}$; polycrystalline results by Kny77 (+++).

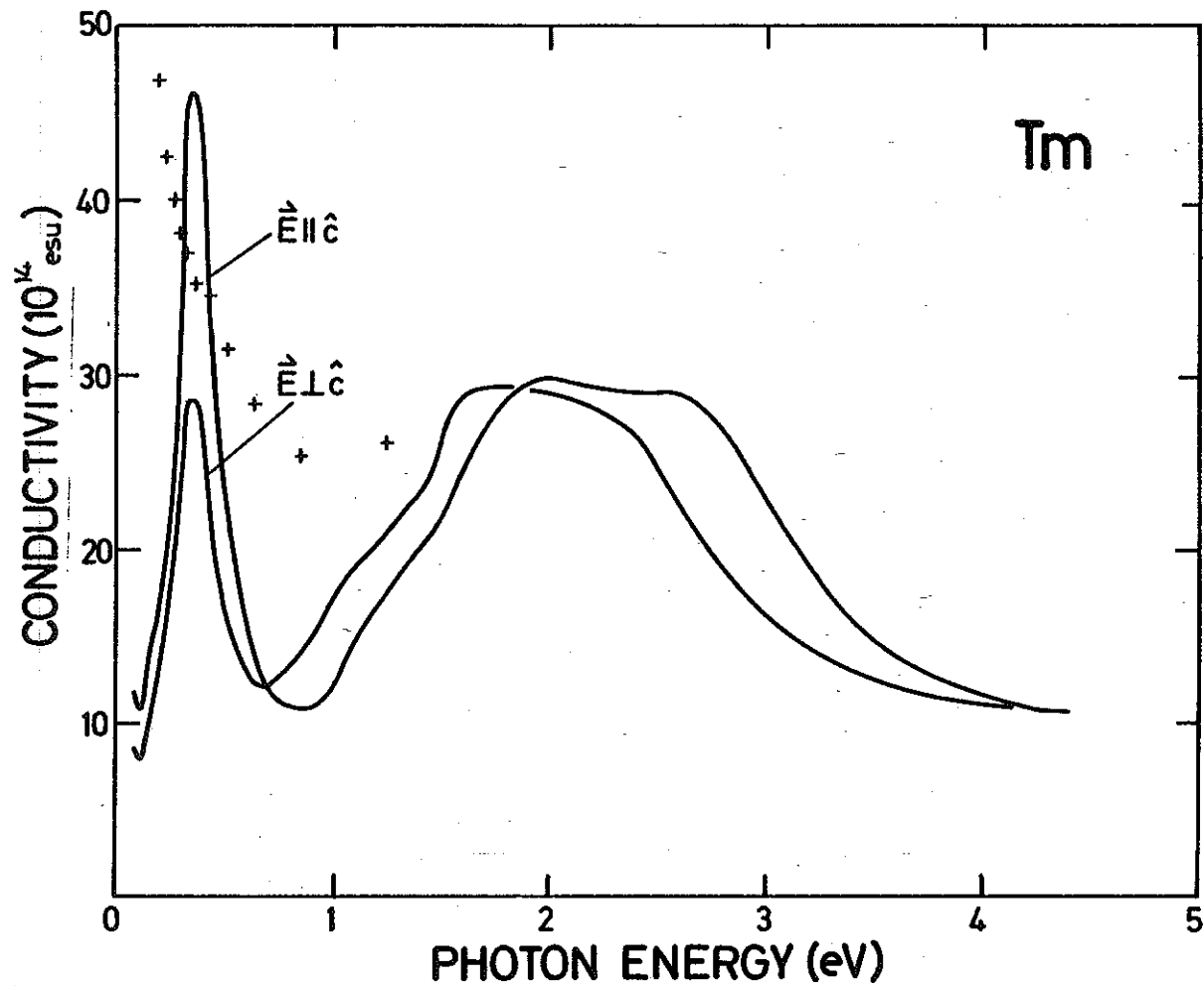


Fig. 81 Optical conductivity for Tm. Single crystal results by WL75 (—) for $\vec{E} \parallel \hat{c}$ and $\vec{E} \perp \hat{c}$; polycrystalline results by Kny77 (+++).

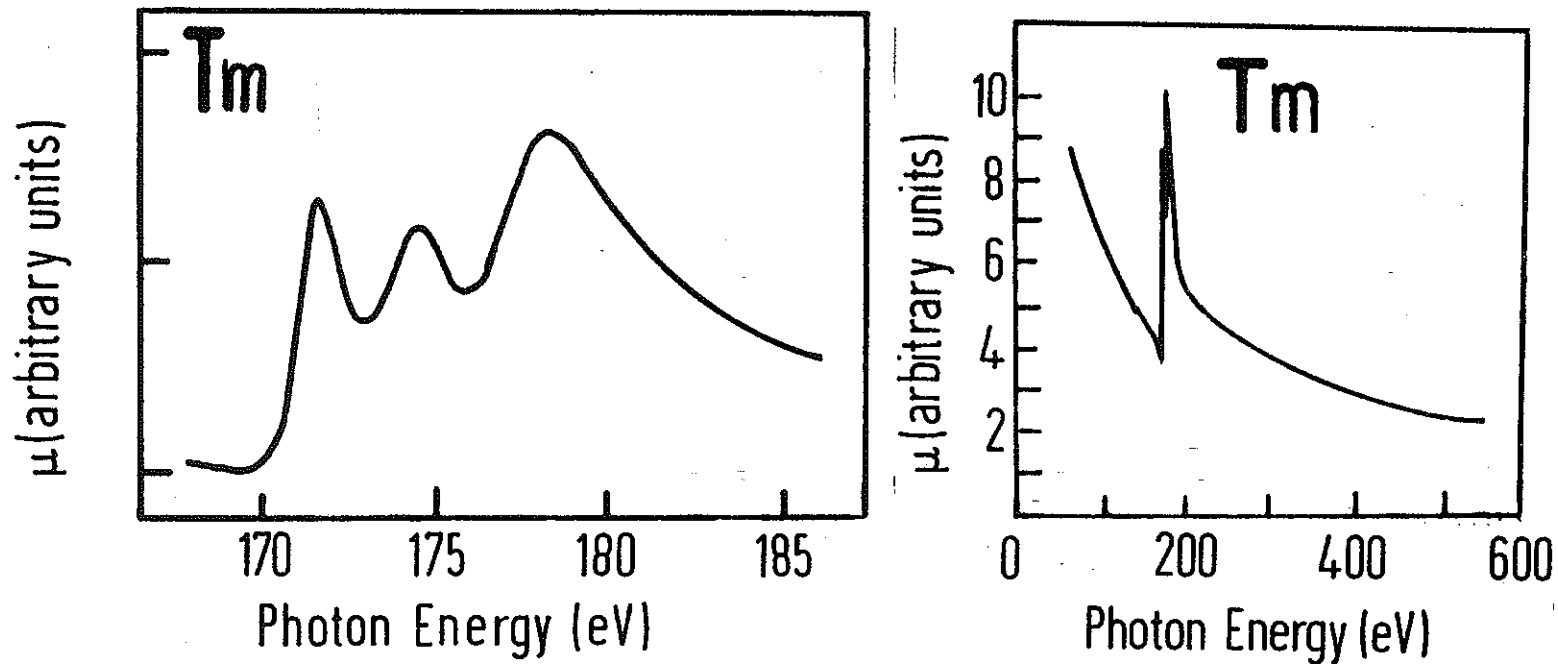


Fig. 82 Absorption coefficient of Tm. FZG67 show fine structure below the onset of the large maxima. Fine structure is interpolated by ZFG67 in the expanded energy range.

Thulium single crystal with $\vec{E} \parallel \hat{c}$

publication by J.H. Weaver and D.W. Lynch in Phys. Rev. Lett. 34, 1324 (1975)
based on the following tabulation

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-217.18	65.92	2.21	1.05	0.00	.051
0.12	-131.83	52.51	2.24	1.06	0.00	.053
0.14	-79.26	53.34	2.85	1.19	0.01	.089
0.16	-48.42	53.82	3.46	1.32	0.01	.130
0.18	-27.54	54.33	4.08	1.43	0.01	.172
0.20	-13.77	55.09	4.64	1.52	0.02	.208
0.21	-8.31	56.13	4.92	1.57	0.02	.226
0.22	-4.14	57.51	5.17	1.61	0.02	.242
0.23	-0.85	58.90	5.39	1.64	0.02	.255
0.24	1.47	60.32	5.56	1.67	0.02	.265
0.25	3.77	61.47	5.72	1.69	0.02	.274
0.26	5.52	63.38	5.88	1.71	0.02	.283
0.27	6.40	65.76	6.02	1.73	0.02	.291
0.28	6.34	68.50	6.13	1.75	0.01	.297
0.29	3.98	71.44	6.15	1.75	0.01	.298
0.30	1.11	72.33	6.06	1.74	0.01	.293
0.32	-4.77	72.23	5.81	1.71	0.01	.280
0.34	-10.79	69.80	5.47	1.65	0.01	.259
0.36	-15.92	65.44	5.07	1.59	0.01	.235
0.38	-19.84	60.01	4.66	1.53	0.02	.209
0.40	-22.60	53.92	4.23	1.46	0.02	.182
0.42	-23.84	47.64	3.84	1.38	0.02	.155
0.44	-23.87	41.85	3.49	1.32	0.02	.131
0.46	-23.40	36.50	3.16	1.26	0.02	.109
0.48	-22.23	31.43	2.85	1.19	0.02	.089
0.50	-20.26	26.63	2.57	1.13	0.02	.071
0.54	-14.43	21.28	2.38	1.09	0.03	.060
0.58	-10.30	18.36	2.32	1.08	0.04	.057
0.62	-7.11	16.30	2.31	1.07	0.05	.056
0.66	-3.98	15.04	2.41	1.10	0.06	.062
0.70	-1.87	14.51	2.53	1.12	0.07	.069
0.74	-0.24	14.13	2.64	1.15	0.07	.075
0.78	1.00	13.92	2.73	1.17	0.07	.082
0.82	2.00	13.79	2.82	1.19	0.07	.087
0.86	2.86	13.71	2.90	1.21	0.07	.093
0.90	3.59	13.81	2.99	1.22	0.07	.098
0.95	4.02	14.16	3.06	1.24	0.07	.103
1.00	4.18	14.30	3.09	1.24	0.06	.105
1.05	4.21	14.39	3.10	1.24	0.06	.105
1.10	4.13	14.42	3.09	1.24	0.06	.105
1.15	3.97	14.38	3.07	1.24	0.06	.104
1.20	3.82	14.24	3.05	1.23	0.07	.102
1.25	3.69	14.10	3.02	1.23	0.07	.100
1.30	3.59	13.95	3.00	1.22	0.07	.099
1.35	3.54	13.82	2.98	1.22	0.07	.098
1.40	3.64	13.73	2.99	1.22	0.07	.098
1.45	3.67	13.99	3.01	1.23	0.07	.100
1.50	3.43	14.43	3.02	1.23	0.07	.100
1.55	2.79	14.86	2.99	1.22	0.07	.098

Tm $\vec{E} \parallel \hat{c}$

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ ϵ)	R($\phi=0$)
1.60	1.85	14.92	2.91	1.21	0.07	.093
1.65	1.22	14.51	2.81	1.19	0.07	.086
1.70	0.64	14.24	2.73	1.17	0.07	.081
1.75	0.15	13.84	2.64	1.15	0.07	.076
1.80	-0.24	13.46	2.57	1.13	0.07	.072
1.85	-0.62	13.09	2.50	1.12	0.08	.067
1.90	-0.93	12.70	2.43	1.10	0.08	.063
1.95	-1.21	12.35	2.37	1.09	0.08	.059
2.00	-1.52	12.00	2.30	1.07	0.08	.056
2.10	-2.02	11.26	2.17	1.04	0.09	.049
2.20	-2.49	10.55	2.04	1.01	0.09	.042
2.30	-2.90	9.85	1.92	0.98	0.09	.036
2.40	-3.42	9.03	1.77	0.94	0.10	.030
2.50	-3.65	8.06	1.61	0.90	0.10	.024
2.60	-3.72	7.14	1.47	0.86	0.11	.020
2.70	-3.60	6.31	1.35	0.82	0.12	.017
2.80	-3.43	5.59	1.25	0.79	0.13	.015
2.90	-3.18	4.96	1.16	0.76	0.14	.013
3.00	-2.88	4.45	1.10	0.74	0.16	.013
3.10	-2.60	4.04	1.05	0.72	0.18	.012
3.20	-2.33	3.70	1.01	0.71	0.19	.012
3.30	-2.07	3.42	0.98	0.70	0.21	.012
3.40	-1.83	3.19	0.96	0.69	0.24	.012
3.50	-1.63	2.99	0.94	0.69	0.26	.013
3.60	-1.44	2.82	0.93	0.68	0.28	.013
3.70	-1.26	2.67	0.92	0.68	0.31	.013
3.80	-1.10	2.53	0.91	0.67	0.33	.013
3.90	-0.95	2.41	0.91	0.67	0.36	.013
4.00	-0.81	2.31	0.90	0.67	0.39	.013
4.10	-0.67	2.21	0.91	0.67	0.41	.013
4.20	-0.55	2.13	0.91	0.67	0.44	.013
4.30	-0.42	2.07	0.92	0.68	0.46	.013
4.40	-0.32	2.03	0.93	0.68	0.48	.013
4.50	-0.24	1.98	0.94	0.68	0.50	.013
4.60	-0.15	1.94	0.95	0.69	0.51	.013
4.80	-0.04	1.87	0.96	0.69	0.53	.012
5.00	0.05	1.80	0.96	0.69	0.56	.012

Thulium single crystal with $\vec{E} \perp \hat{c}$

publication by J.H. Weaver and D.W. Lynch in Phys. Rev. Lett. 34, 1324 (1975)
based on the following tabulation

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-267.58	91.29	2.75	1.17	0.00	.083
0.12	-161.49	72.76	2.80	1.18	0.00	.086
0.14	-95.35	75.39	3.62	1.35	0.01	.140
0.16	-59.30	75.16	4.27	1.46	0.01	.184
0.18	-35.80	73.11	4.78	1.55	0.01	.217
0.20	-16.99	71.58	5.32	1.63	0.01	.250
0.21	-10.02	71.93	5.59	1.67	0.01	.267
0.22	-3.33	72.03	5.86	1.71	0.01	.282
0.23	2.84	72.82	6.15	1.75	0.01	.298
0.24	8.87	74.22	6.47	1.80	0.01	.315
0.25	14.86	76.88	6.83	1.85	0.01	.334
0.26	19.84	81.78	7.21	1.90	0.01	.353
0.27	22.70	88.50	7.55	1.94	0.01	.369
0.28	23.24	95.83	7.81	1.98	0.01	.380
0.29	20.74	103.69	7.95	1.99	0.01	.387
0.30	15.31	110.23	7.96	1.99	0.01	.387
0.32	-1.86	116.85	7.58	1.95	0.01	.370
0.34	-17.43	112.33	6.94	1.86	0.01	.339
0.36	-28.91	104.36	6.30	1.77	0.01	.306
0.38	-39.02	93.90	5.60	1.67	0.01	.267
0.40	-43.45	81.96	4.97	1.58	0.01	.229
0.42	-46.32	70.62	4.37	1.48	0.01	.190
0.44	-45.72	60.37	3.87	1.39	0.01	.157
0.46	-44.32	51.56	3.44	1.31	0.01	.128
0.48	-41.57	44.34	3.10	1.24	0.01	.105
0.50	-38.81	38.25	2.80	1.18	0.01	.086
0.54	-32.64	29.45	2.38	1.09	0.02	.060
0.58	-27.14	23.41	2.09	1.02	0.02	.044
0.62	-22.28	19.12	1.88	0.97	0.02	.034
0.66	-18.00	16.26	1.77	0.94	0.03	.030
0.70	-14.57	13.93	1.67	0.91	0.03	.026
0.74	-11.22	12.44	1.66	0.91	0.04	.026
0.78	-8.45	11.64	1.72	0.93	0.06	.028
0.82	-6.51	10.85	1.75	0.94	0.07	.029
0.86	-4.32	10.32	1.85	0.96	0.08	.033
0.90	-2.59	10.13	1.98	1.00	0.09	.039
0.95	-0.80	10.06	2.16	1.04	0.10	.048
1.00	0.68	10.23	2.34	1.08	0.10	.058
1.05	1.72	10.69	2.50	1.12	0.09	.068
1.10	2.28	11.19	2.62	1.14	0.09	.074
1.15	2.63	11.45	2.68	1.16	0.08	.078
1.20	2.86	11.64	2.72	1.17	0.08	.081
1.25	3.02	11.78	2.76	1.17	0.08	.083
1.30	3.10	11.88	2.77	1.18	0.08	.084
1.35	3.14	11.93	2.78	1.18	0.08	.085
1.40	3.18	11.92	2.79	1.18	0.08	.085
1.45	3.33	11.88	2.80	1.18	0.08	.086
1.50	3.61	12.01	2.84	1.19	0.08	.089
1.55	3.62	12.53	2.89	1.20	0.07	.091

Tm $\tilde{\epsilon} \perp \hat{c}$

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\tilde{\epsilon})$	$R(\phi=0)$
1.60	3.37	12.94	2.89	1.20	0.07	.092
1.65	2.92	13.27	2.87	1.20	0.07	.090
1.70	2.36	13.39	2.82	1.19	0.07	.087
1.75	1.77	13.31	2.76	1.17	0.07	.083
1.80	1.64	13.07	2.72	1.17	0.08	.081
1.85	1.01	13.34	2.68	1.16	0.07	.078
1.90	0.37	13.05	2.59	1.14	0.08	.073
1.95	-0.04	12.66	2.51	1.12	0.08	.068
2.00	-0.36	12.31	2.44	1.11	0.08	.064
2.10	-0.86	11.66	2.33	1.08	0.09	.057
2.20	-1.28	11.08	2.22	1.05	0.09	.051
2.30	-1.63	10.32	2.10	1.02	0.09	.045
2.40	-1.89	10.02	2.04	1.01	0.10	.042
2.50	-2.18	9.62	1.96	0.99	0.10	.038
2.60	-2.63	9.21	1.86	0.97	0.10	.034
2.70	-3.11	8.65	1.74	0.93	0.10	.029
2.80	-3.48	7.94	1.61	0.90	0.11	.024
2.90	-3.73	7.16	1.47	0.86	0.11	.020
3.00	-3.80	6.38	1.35	0.82	0.12	.016
3.10	-3.75	5.65	1.23	0.78	0.12	.014
3.20	-3.62	4.99	1.13	0.75	0.13	.013
3.30	-3.41	4.40	1.04	0.72	0.14	.012
3.40	-3.14	3.87	0.96	0.69	0.16	.012
3.50	-2.80	3.48	0.91	0.68	0.17	.013
3.60	-2.51	3.19	0.88	0.66	0.19	.013
3.70	-2.25	2.96	0.86	0.65	0.21	.013
3.80	-2.02	2.75	0.83	0.65	0.24	.014
3.90	-1.80	2.58	0.82	0.64	0.26	.014
4.00	-1.61	2.44	0.81	0.64	0.29	.014
4.10	-1.44	2.31	0.80	0.63	0.31	.015
4.20	-1.27	2.19	0.79	0.63	0.34	.015
4.30	-1.10	2.10	0.80	0.63	0.37	.015
4.40	-0.95	2.04	0.81	0.63	0.40	.014
4.50	-0.84	1.99	0.81	0.64	0.43	.014
4.60	-0.74	1.93	0.81	0.64	0.45	.014
4.80	-0.57	1.81	0.81	0.64	0.50	.014
5.00	-0.40	1.71	0.82	0.64	0.55	.014