

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks Er
				Film	X-tal	Bulk	Prep		
FZG67	161-180	Trans		x				μ	absorption measurements
ZFG67	60-470	Trans		x				μ	absorption measurements
BBS71	1-50	Trans		x				$\text{Im}(\epsilon^{-1})$	energy loss spectroscopy
TC73	160-200	Trans		x				μ	energy loss spectroscopy
Kun75	50-550	Trans		x				μ	absorption measurements with synchrotron radiation
KT75	0.35-2.5	Ellips		x				σ	
WL75	0.2-4.4	Ref1	4.2		x		EP	A; KK: σ for E \perp c and E \parallel c	absorptivity measured by calorimetry; examine optical anisotropy
CGT76		Trans		x					energy loss spectroscopy
KN77									review paper
Liu77									review paper covering band structure, optical and photoemission properties
Tra77	24-38	Trans	vapor	x				μ	absorption measurements of metal vapor with synchrotron radiation
Lyn78									review paper

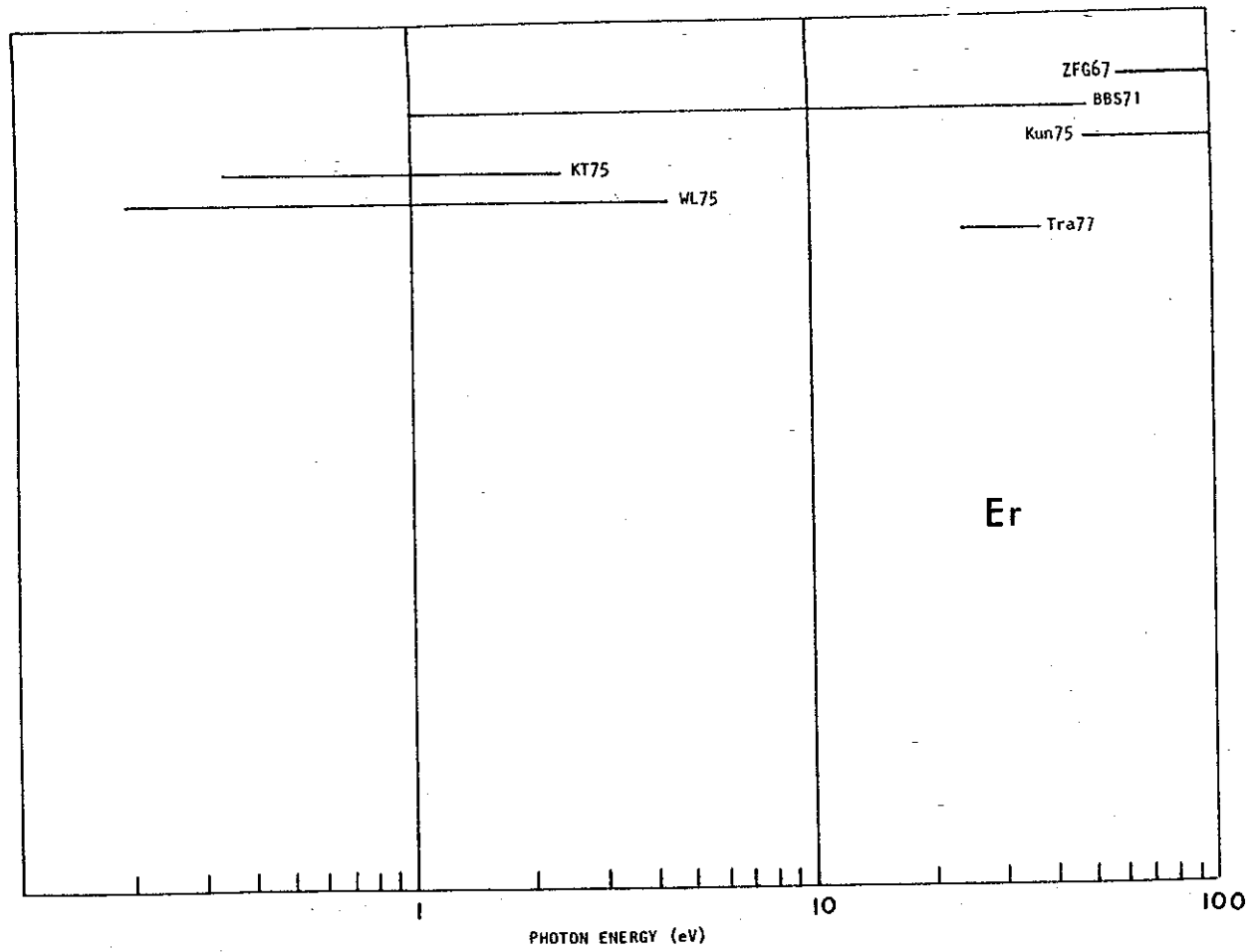


Fig. 75 Survey of available data on Er.

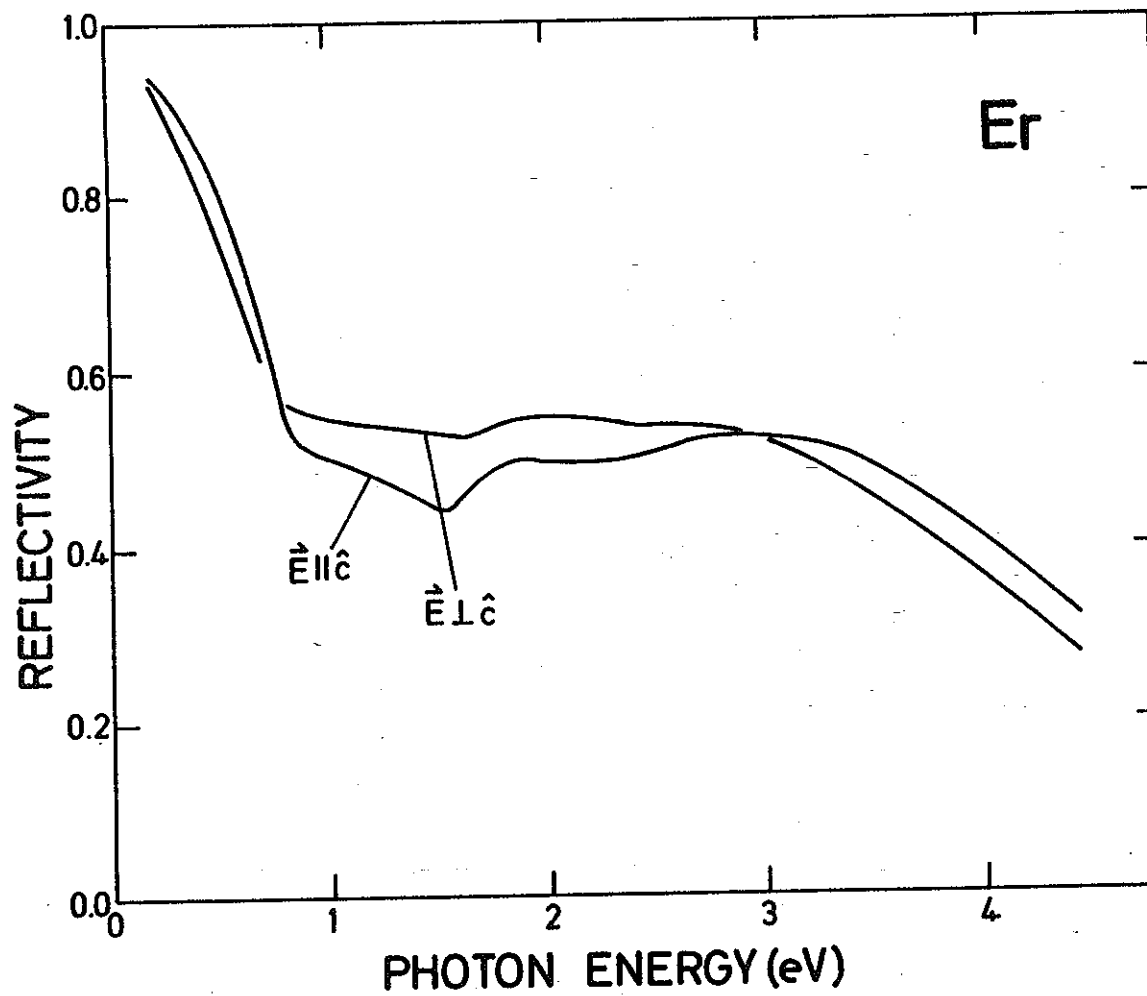


Fig. 76 Reflectivity for Er. Single crystal results by WL75 for $\vec{E} \parallel \hat{c}$ and $\vec{E} \perp \hat{c}$.

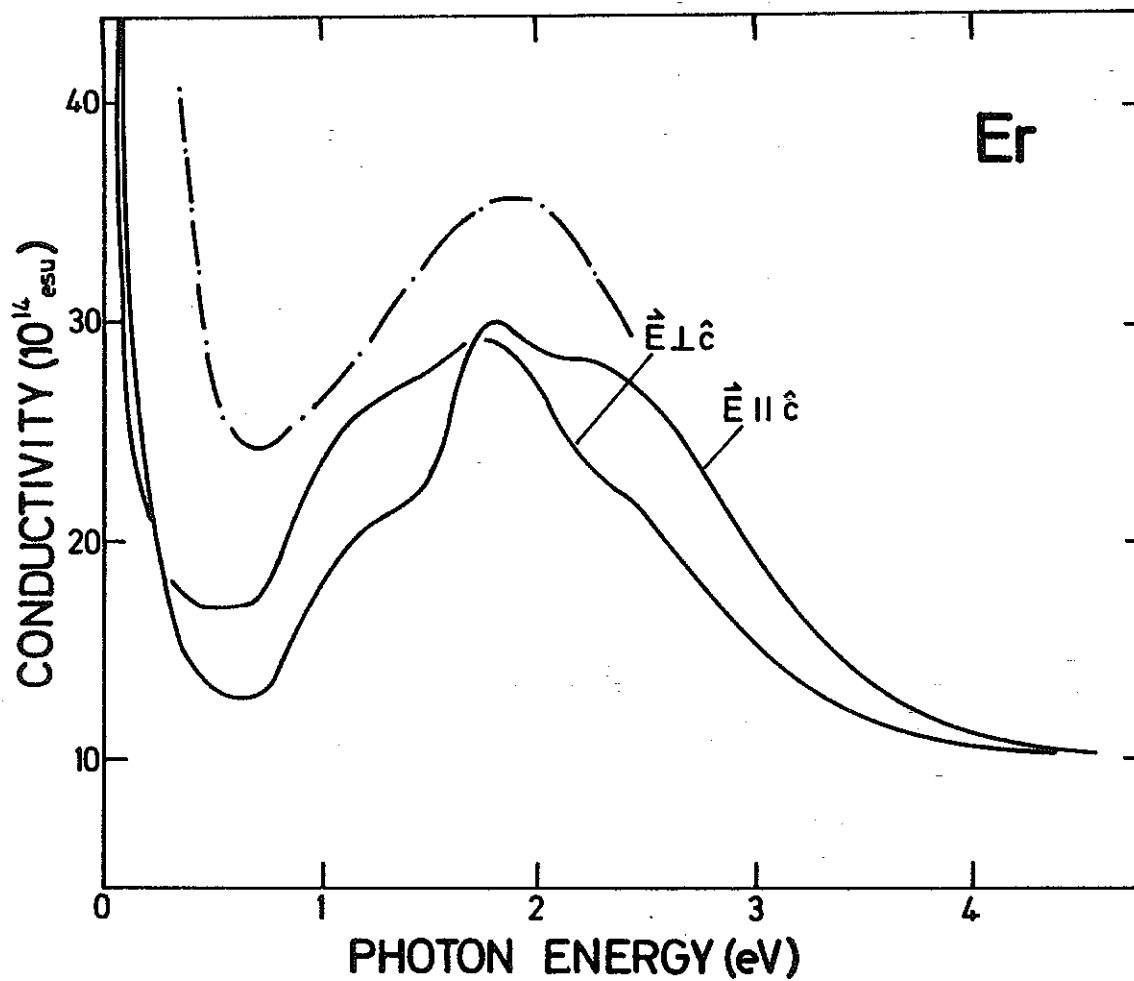


Fig. 77 Optical conductivity for Er. Single crystal results by WL75 (—) for $\vec{E} \parallel \hat{c}$ and $\vec{E} \perp \hat{c}$; polycrystalline results by KT75 (---).

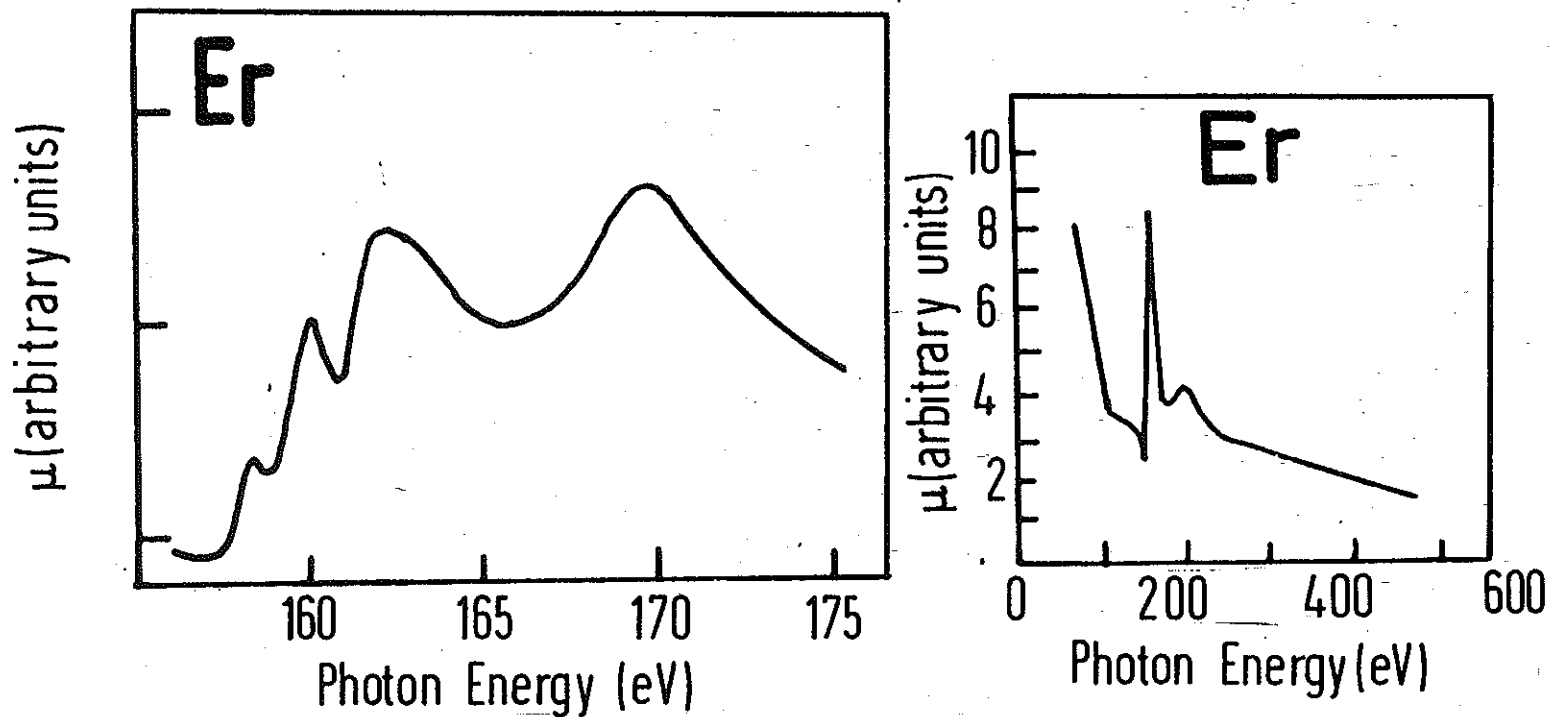


Fig. 78 Absorption coefficient of Er. FZG67 show fine structure below the onset of the large maxima. Fine structure is interpolated by ZFG67 in the expanded energy range.

Erbium 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	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
0.10	-596.04	249.34	5.00	1.58	0.00	.231
0.14	-306.76	142.33	3.96	1.41	0.00	.163
0.18	-185.78	102.56	3.64	1.35	0.00	.141
0.22	-126.85	78.51	3.34	1.29	0.00	.122
0.26	-92.05	61.24	3.04	1.23	0.01	.102
0.30	-68.29	50.40	2.88	1.20	0.01	.091
0.34	-52.33	42.08	2.72	1.17	0.01	.081
0.38	-39.84	36.90	2.69	1.16	0.01	.079
0.42	-31.09	33.55	2.71	1.16	0.02	.080
0.46	-25.14	30.55	2.69	1.16	0.02	.079
0.50	-20.07	28.29	2.70	1.16	0.02	.080
0.54	-16.61	26.40	2.70	1.16	0.03	.079
0.58	-13.91	24.39	2.66	1.15	0.03	.077
0.62	-11.13	22.62	2.65	1.15	0.04	.077
0.66	-8.75	21.27	2.67	1.16	0.04	.078
0.70	-6.52	20.25	2.72	1.17	0.04	.080
0.75	-4.00	19.60	2.83	1.19	0.05	.088
0.80	-2.40	19.56	2.94	1.21	0.05	.095
0.85	-1.39	19.63	3.02	1.23	0.05	.100
0.90	-0.93	19.69	3.06	1.24	0.05	.103
0.95	-0.72	19.57	3.07	1.24	0.05	.104
1.00	-0.66	19.38	3.06	1.24	0.05	.103
1.05	-0.76	19.13	3.03	1.23	0.05	.101
1.10	-0.94	18.79	2.99	1.22	0.05	.098
1.15	-1.16	18.37	2.94	1.21	0.05	.095
1.20	-1.34	17.87	2.88	1.20	0.06	.091
1.25	-1.50	17.40	2.83	1.19	0.06	.087
1.30	-1.65	16.93	2.77	1.18	0.06	.084
1.35	-1.80	16.47	2.72	1.17	0.06	.081
1.40	-1.92	16.02	2.67	1.15	0.06	.077
1.45	-2.03	15.59	2.62	1.14	0.06	.074
1.50	-2.12	15.21	2.57	1.13	0.06	.072
1.55	-2.23	14.90	2.53	1.13	0.07	.069
1.60	-2.37	14.64	2.50	1.12	0.07	.067
1.65	-2.60	14.42	2.45	1.11	0.07	.064
1.70	-2.97	14.14	2.40	1.09	0.07	.061
1.75	-3.30	13.76	2.33	1.08	0.07	.057
1.80	-3.66	13.35	2.26	1.06	0.07	.053
1.85	-3.96	12.86	2.18	1.04	0.07	.049
1.90	-4.28	12.34	2.10	1.02	0.07	.045
1.95	-4.49	11.74	2.01	1.00	0.07	.041
2.00	-4.66	11.14	1.93	0.98	0.08	.036
2.10	-4.72	10.01	1.78	0.94	0.08	.030
2.20	-4.64	9.02	1.66	0.91	0.09	.026
2.30	-4.45	8.23	1.57	0.88	0.09	.022
2.40	-4.33	7.57	1.48	0.86	0.10	.020
2.50	-4.24	6.95	1.40	0.84	0.10	.018
2.60	-4.16	6.32	1.30	0.81	0.11	.016
2.70	-4.01	5.70	1.22	0.78	0.12	.014

Er $\tilde{\epsilon}_{||c}$

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ $\tilde{\epsilon}$)	R($\phi=0$)
2.80	-3.82	5.12	1.13	0.75	0.13	.013
2.90	-3.54	4.61	1.07	0.73	0.14	.013
3.00	-3.27	4.19	1.01	0.71	0.15	.012
3.10	-3.02	3.82	0.96	0.69	0.16	.012
3.20	-2.76	3.48	0.92	0.68	0.18	.013
3.30	-2.48	3.21	0.89	0.67	0.20	.013
3.40	-2.23	2.98	0.86	0.66	0.22	.013
3.50	-2.00	2.80	0.85	0.65	0.24	.014
3.60	-1.80	2.63	0.83	0.65	0.26	.014
3.70	-1.60	2.48	0.82	0.64	0.28	.014
3.80	-1.41	2.36	0.82	0.64	0.31	.014
3.90	-1.24	2.26	0.82	0.64	0.34	.014
4.00	-1.09	2.16	0.82	0.64	0.37	.014
4.10	-0.95	2.07	0.81	0.64	0.40	.014
4.20	-0.81	2.00	0.82	0.64	0.43	.014
4.30	-0.67	1.94	0.83	0.64	0.46	.014
4.40	-0.55	1.90	0.85	0.65	0.49	.014
4.50	-0.45	1.87	0.86	0.66	0.51	.013
4.60	-0.35	1.84	0.87	0.66	0.52	.013
4.80	-0.23	1.79	0.89	0.67	0.55	.013
5.00	-0.11	1.74	0.90	0.67	0.57	.013

Erbium 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	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.08	-911.67	554.79	8.82	2.10	0.00	.423
0.10	-631.01	364.01	6.98	1.87	0.00	.342
0.14	-357.65	189.33	4.85	1.56	0.00	.221
0.18	-226.93	113.36	3.66	1.35	0.00	.143
0.22	-153.66	81.14	3.17	1.26	0.00	.110
0.26	-112.55	60.51	2.76	1.17	0.00	.083
0.30	-84.94	46.80	2.45	1.11	0.00	.064
0.34	-65.34	37.47	2.23	1.06	0.01	.052
0.38	-50.79	31.31	2.11	1.03	0.01	.045
0.42	-39.94	27.17	2.05	1.01	0.01	.042
0.46	-31.78	24.44	2.04	1.01	0.02	.042
0.50	-25.78	22.24	2.03	1.01	0.02	.042
0.54	-21.04	20.56	2.05	1.01	0.02	.042
0.58	-17.52	18.92	2.03	1.01	0.03	.042
0.62	-14.44	17.29	2.01	1.00	0.03	.041
0.66	-11.55	15.88	2.01	1.00	0.04	.041
0.70	-8.75	14.91	2.07	1.02	0.05	.043
0.75	-5.58	14.49	2.23	1.06	0.06	.052
0.80	-3.44	14.57	2.40	1.10	0.07	.061
0.85	-2.04	14.79	2.54	1.13	0.07	.069
0.90	-1.11	14.96	2.64	1.15	0.07	.075
0.95	-0.53	15.06	2.70	1.16	0.07	.079
1.00	-0.22	15.06	2.72	1.17	0.07	.081
1.05	-0.04	14.91	2.73	1.17	0.07	.081
1.10	0.05	14.67	2.71	1.16	0.07	.080
1.15	0.23	14.35	2.70	1.16	0.07	.079
1.20	0.31	14.10	2.68	1.16	0.07	.079
1.25	0.40	13.79	2.66	1.15	0.07	.077
1.30	0.47	13.47	2.64	1.15	0.07	.076
1.35	0.65	13.13	2.63	1.15	0.08	.075
1.40	0.84	12.88	2.62	1.14	0.08	.075
1.45	1.13	12.66	2.63	1.15	0.08	.075
1.50	1.48	12.62	2.66	1.15	0.08	.077
1.55	1.78	12.86	2.72	1.17	0.08	.080
1.60	1.73	13.37	2.76	1.17	0.07	.083
1.65	1.38	13.81	2.76	1.18	0.07	.083
1.70	0.69	14.09	2.72	1.17	0.07	.081
1.75	0.00	14.00	2.65	1.15	0.07	.076
1.80	-0.69	13.74	2.56	1.13	0.07	.071
1.85	-1.20	13.27	2.46	1.11	0.07	.065
1.90	-1.56	12.77	2.38	1.09	0.08	.060
1.95	-1.77	12.30	2.31	1.07	0.08	.056
2.00	-1.97	11.91	2.25	1.06	0.08	.053
2.10	-2.25	11.20	2.14	1.03	0.09	.047
2.20	-2.53	10.60	2.05	1.01	0.09	.042
2.30	-2.83	10.03	1.95	0.99	0.09	.038
2.40	-3.15	9.43	1.84	0.96	0.10	.033
2.50	-3.46	8.79	1.73	0.93	0.10	.028
2.60	-3.72	8.07	1.61	0.90	0.10	.024

$E_r \vec{E} \perp \hat{c}$

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
2.70	-3.85	7.30	1.48	0.86	0.11	.020
2.80	-3.83	6.56	1.37	0.83	0.11	.017
2.90	-3.74	5.90	1.27	0.80	0.12	.015
3.00	-3.60	5.31	1.19	0.77	0.13	.014
3.10	-3.41	4.78	1.11	0.74	0.14	.013
3.20	-3.21	4.31	1.04	0.72	0.15	.012
3.30	-2.98	3.88	0.98	0.70	0.16	.012
3.40	-2.72	3.52	0.93	0.68	0.18	.013
3.50	-2.46	3.22	0.89	0.67	0.20	.013
3.60	-2.23	2.97	0.86	0.66	0.22	.013
3.70	-1.99	2.76	0.84	0.65	0.24	.014
3.80	-1.78	2.59	0.83	0.64	0.26	.014
3.90	-1.59	2.43	0.81	0.64	0.29	.014
4.00	-1.42	2.29	0.80	0.63	0.32	.015
4.10	-1.24	2.17	0.79	0.63	0.35	.015
4.20	-1.08	2.07	0.79	0.63	0.38	.015
4.30	-0.92	1.99	0.80	0.63	0.41	.015
4.40	-0.79	1.93	0.80	0.63	0.44	.014
4.50	-0.67	1.87	0.81	0.64	0.47	.014
4.60	-0.55	1.83	0.82	0.64	0.50	.014
4.80	-0.37	1.75	0.84	0.65	0.55	.014
5.00	-0.21	1.69	0.86	0.66	0.58	.013