

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks
				Film	X-tal	Bulk	Prep		
Pet69	1.5-6.2	Trans		x				T	
PP69	1.5-6.2	Trans		x				T	
PPR70	1.5-6.2	Trans		x				T, $\sigma$	
WL73	0.15-4.4	Ref1	4.2		x		EP	A for $E_{\perp c}$ and $E_{\parallel c}$	absorption measured by calorimetry; determined optical anisotropy
BCF75	~0.01-60			x				$\text{Im}(\epsilon^{-1})$ ; KK: $\epsilon_1, \epsilon_2, \mu$	energy loss spectroscopy
BKB76	1.92		>1000			x		$\epsilon_N$	emissivity
W076	20-250	Trans		x				$\mu$	optical absorption measurements
W077	3.5-30	Ref1			x		EP	R; KK: $\epsilon_1, \epsilon_2, \sigma, \text{Im}(\epsilon^{-1}), \text{Im}(\epsilon+1)^{-1}$	determined optical anisotropy
CGT79	6-14	m- $\theta$		x			In	R, n, k, $\epsilon_1, \epsilon_2, \text{Im}(\epsilon^{-1}), \text{Im}(\epsilon+1)^{-1}$	
CGW80	2-160			x				$\text{Im}(\epsilon^{-1})$	fast electron energy loss spectroscopy

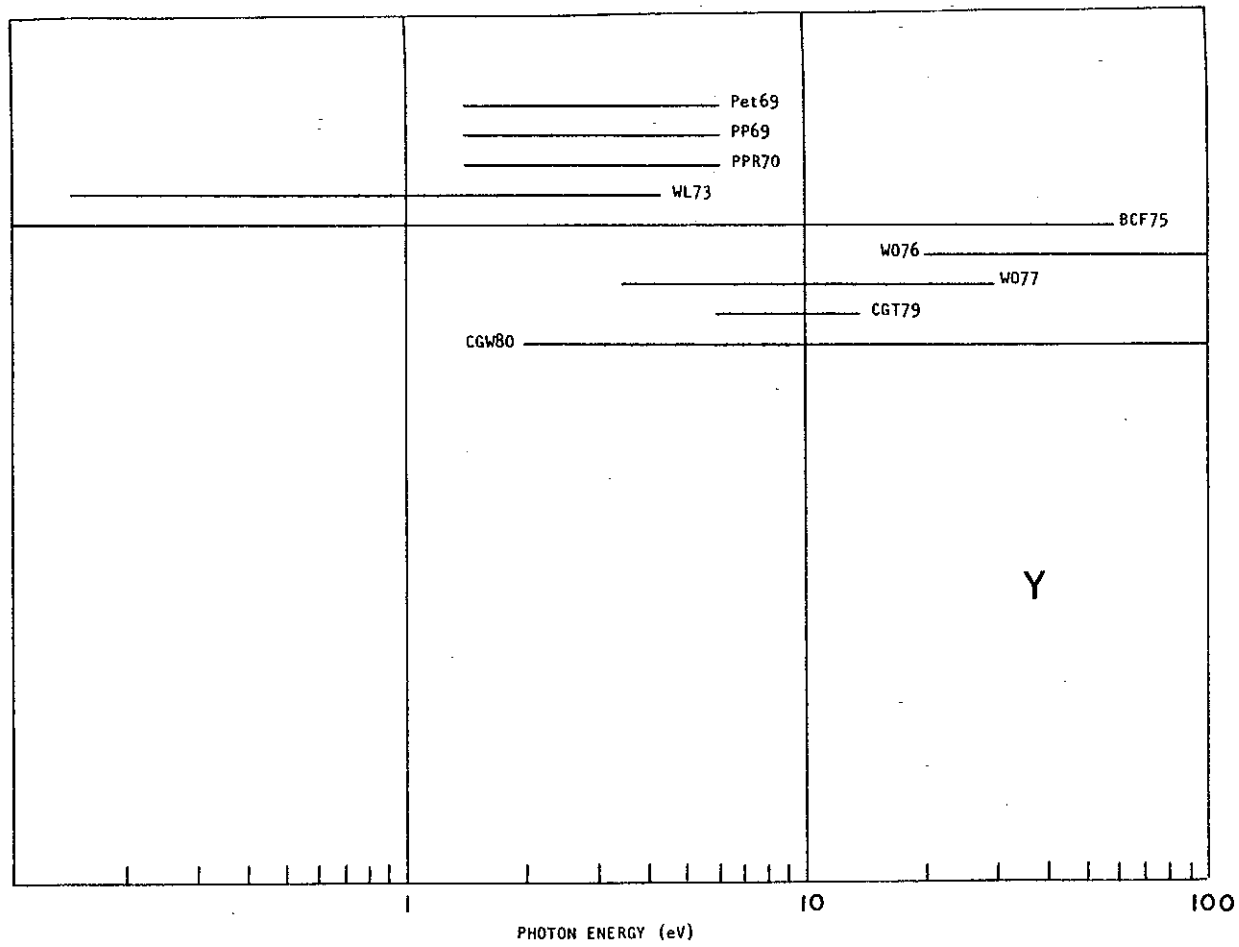


Fig. 26 Survey of available data on Y.

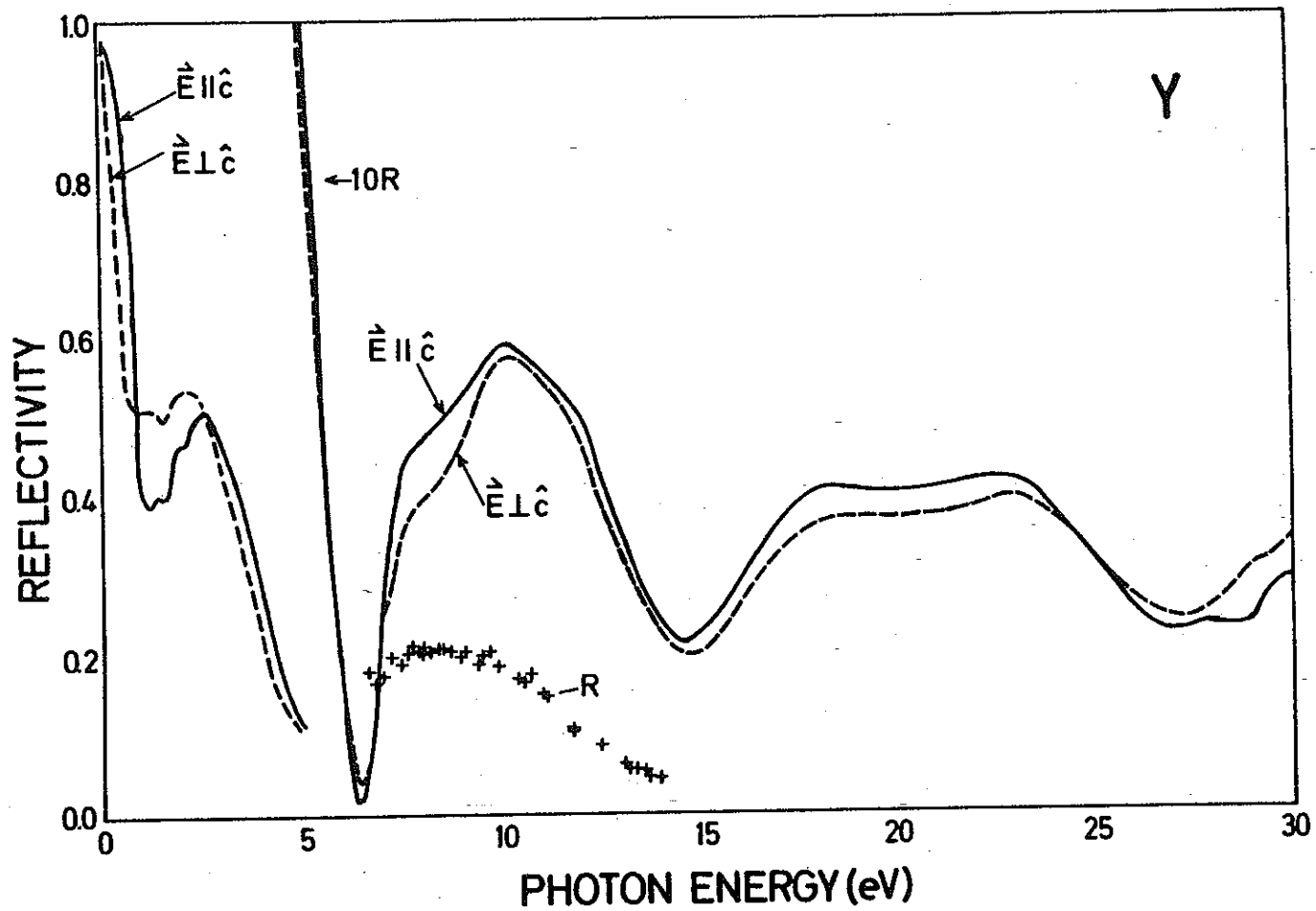


Fig. 27 Reflectivity of Y. Single crystal results by WL73 and W077 for  $\vec{E} \parallel \hat{c}$  (—) and  $\vec{E} \perp \hat{c}$  (---); polycrystalline results by CGT79 (+++).

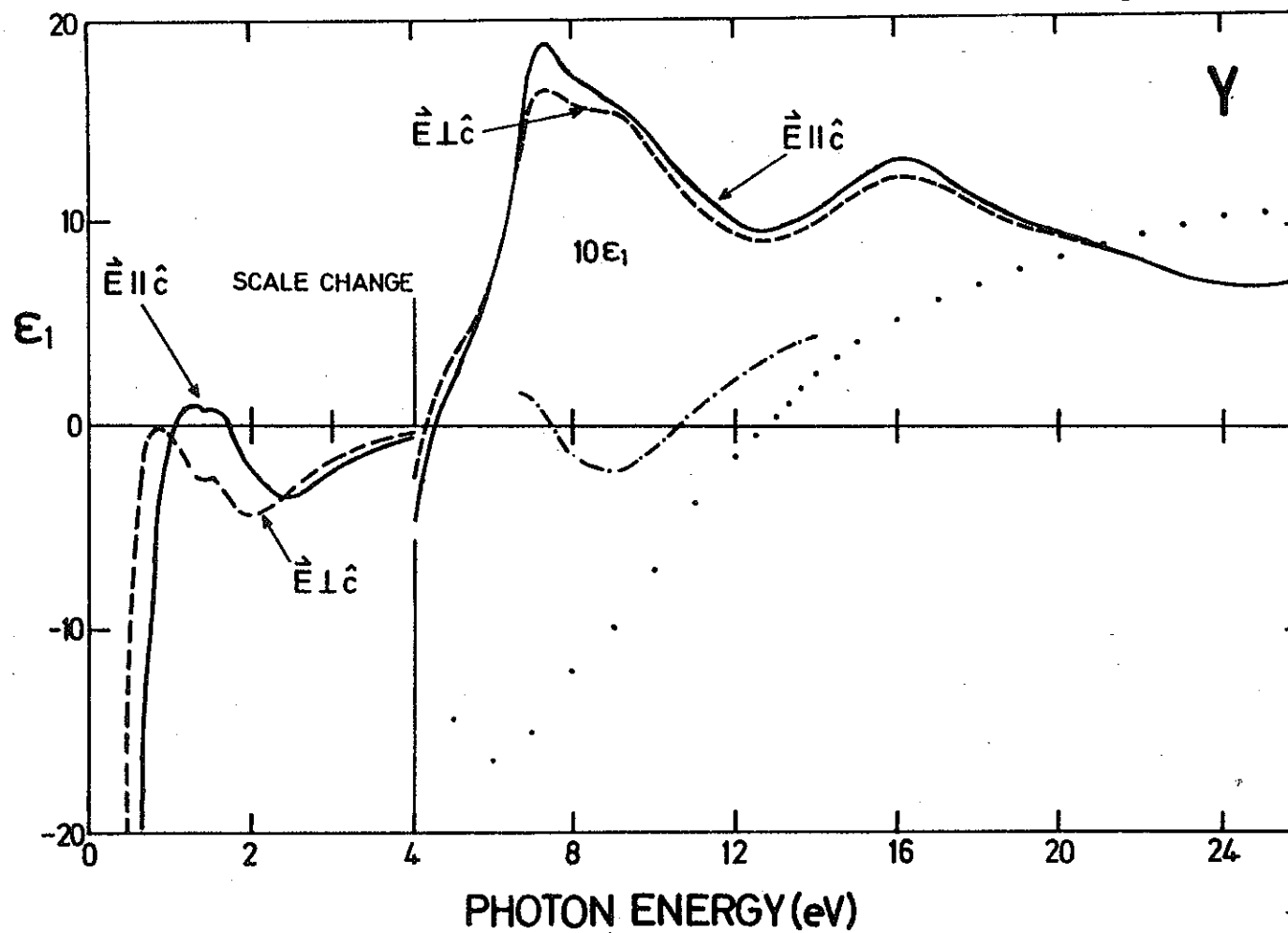


Fig. 28  $\epsilon_1$  for Y. Single crystal results by WL73 and W077 for  $\vec{E} \parallel \hat{c}$  (—) and  $\vec{E} \perp \hat{c}$  (---); polycrystalline results by CGT79 (-•-); results by CGW80 (···) derived from electron energy loss measurements.

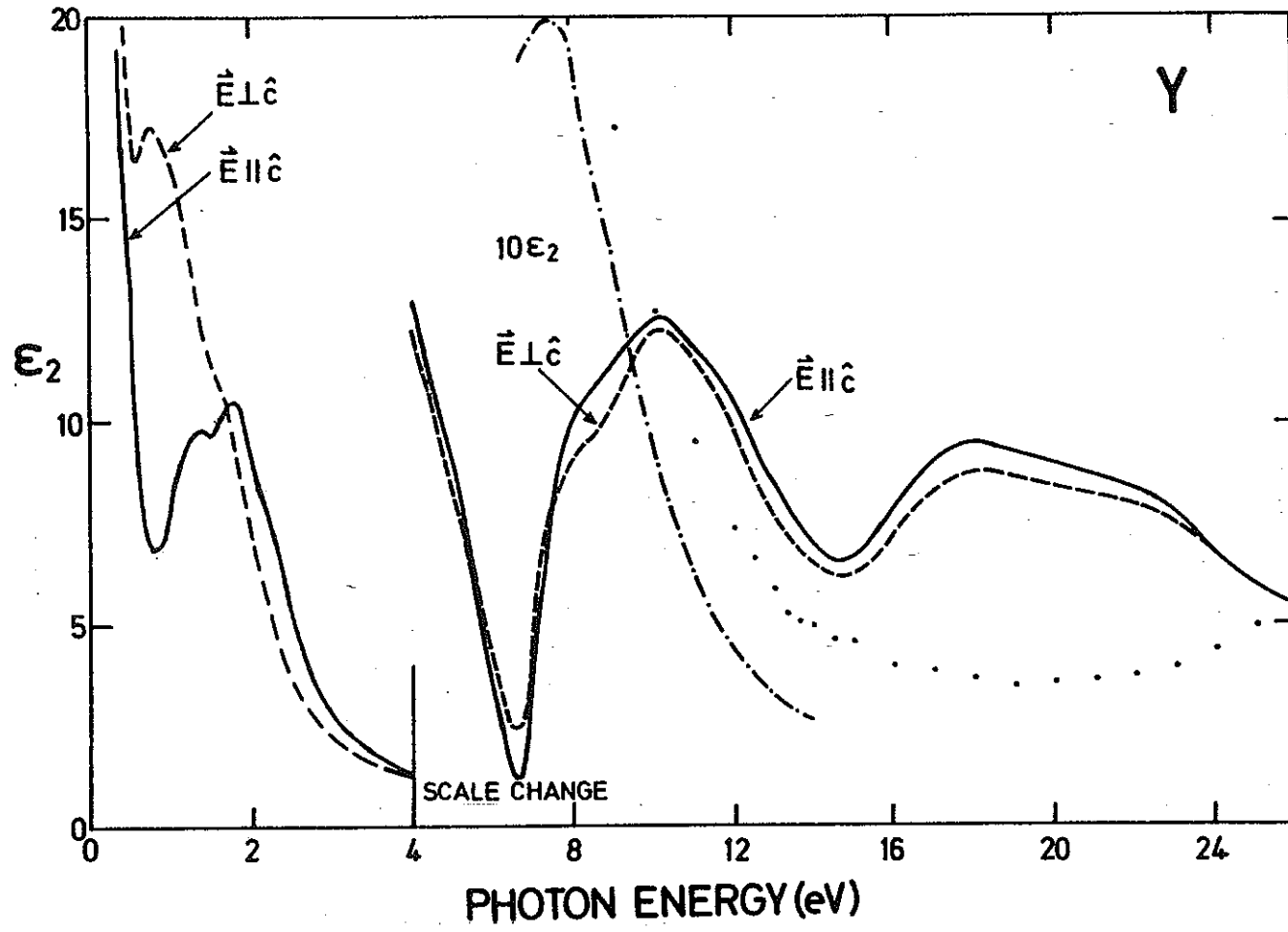


Fig. 29  $\epsilon_2$  for Y. Single crystal results by WL73 and W077 for  $E \parallel c$  (—) and  $E \perp c$  (---); polycrystalline results by CGT79 (-•-); results by CGW80 (···) derived from electron energy loss measurements.

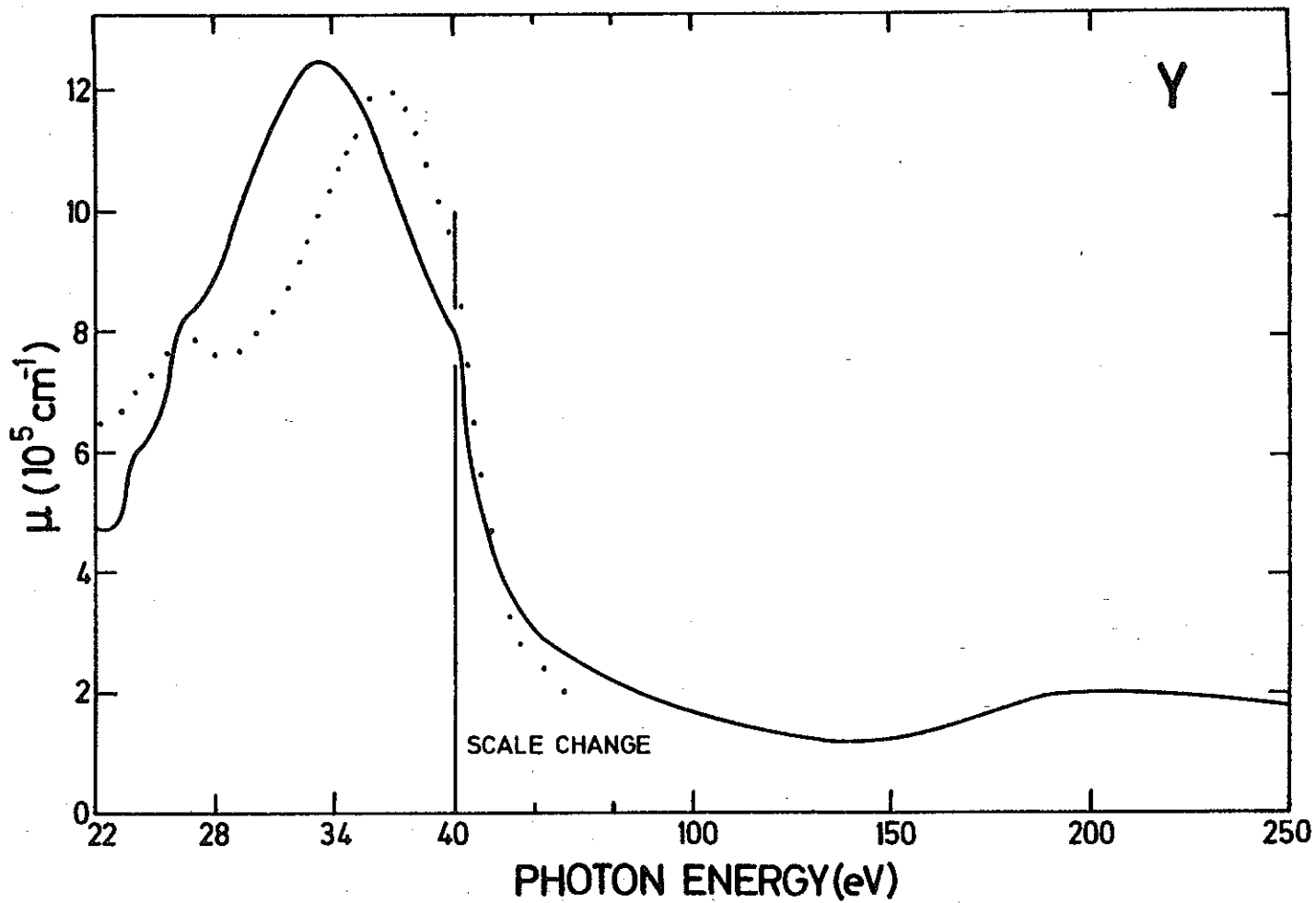


Fig. 30 Absorption coefficient for Y. Polycrystalline Y films results by W076 (—). Results by CGW80 (···) derived from electron energy loss measurements shown with arbitrary units.

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

publications by J.H. Weaver and C.G. Olson in Phys. Rev. B 15, 590 (1977)  
 for energies above 4 eV and by J.H. Weaver and D.W. Lynch in Phys. Rev. B 7,  
 4737 (1973) for energies between 0.1 and 4.4 eV based on the following  
 tabulations

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-861.09	244.93	4.13	29.63	0.00	.982
0.15	-389.75	89.82	2.25	19.86	0.00	.973
0.20	-216.75	47.60	1.61	14.81	0.00	.972
0.22	-177.61	41.26	1.54	13.41	0.00	.967
0.24	-148.78	34.65	1.41	12.28	0.00	.964
0.26	-125.55	30.45	1.35	11.29	0.00	.959
0.28	-107.45	27.32	1.31	10.45	0.00	.954
0.30	-92.91	24.58	1.26	9.72	0.00	.949
0.32	-80.97	22.61	1.24	9.08	0.00	.943
0.34	-71.25	20.85	1.22	8.53	0.00	.937
0.36	-63.06	19.21	1.20	8.03	0.00	.931
0.38	-56.04	17.95	1.18	7.58	0.01	.924
0.40	-50.01	16.72	1.17	7.17	0.01	.917
0.42	-44.80	16.19	1.19	6.80	0.01	.907
0.44	-40.71	15.46	1.19	6.49	0.01	.899
0.46	-37.16	14.67	1.18	6.21	0.01	.891
0.48	-34.08	13.80	1.16	5.95	0.01	.884
0.50	-31.32	12.91	1.13	5.71	0.01	.878
0.52	-28.77	11.79	1.08	5.47	0.01	.874
0.54	-26.20	11.04	1.06	5.23	0.01	.866
0.56	-23.95	10.22	1.02	5.00	0.02	.859
0.58	-21.76	9.60	1.01	4.77	0.02	.850
0.60	-19.78	9.07	1.00	4.56	0.02	.839
0.62	-17.95	8.65	0.99	4.35	0.02	.826
0.64	-16.29	8.31	1.00	4.16	0.02	.812
0.66	-14.81	8.01	1.01	3.98	0.03	.797
0.68	-13.45	7.62	1.00	3.80	0.03	.783
0.70	-12.07	7.39	1.02	3.62	0.04	.763
0.72	-10.86	7.10	1.03	3.45	0.04	.743
0.74	-9.58	6.95	1.06	3.27	0.05	.715
0.76	-8.45	6.92	1.11	3.11	0.06	.685
0.78	-7.46	6.90	1.16	2.97	0.07	.655
0.80	-6.55	6.83	1.21	2.83	0.08	.625
0.82	-5.59	6.93	1.29	2.69	0.09	.587
0.84	-4.90	6.95	1.34	2.59	0.10	.560
0.86	-4.07	7.01	1.42	2.47	0.11	.524
0.88	-3.36	7.15	1.51	2.37	0.11	.484
0.90	-2.74	7.33	1.59	2.30	0.12	.454
0.92	-2.22	7.51	1.67	2.24	0.12	.450
0.94	-1.74	7.68	1.75	2.19	0.12	.434
0.96	-1.35	7.87	1.82	2.16	0.12	.423
0.98	-1.00	8.02	1.88	2.13	0.12	.414
1.00	-0.65	8.18	1.94	2.10	0.12	.406
1.05	-0.06	8.55	2.06	2.08	0.12	.397
1.10	0.40	8.84	2.15	2.06	0.11	.392
1.15	0.75	9.11	2.22	2.05	0.11	.390
1.20	0.95	9.40	2.28	2.06	0.11	.392
1.25	0.99	9.64	2.31	2.09	0.10	.396
1.30	0.96	9.76	2.32	2.10	0.10	.399

$\gamma \tilde{\epsilon} \parallel \hat{c}$ 

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\tilde{\epsilon})$	$R(\phi=0)$
1.35	0.91	9.82	2.32	2.12	0.10	.401
1.40	0.80	9.82	2.31	2.13	0.10	.403
1.45	0.81	9.72	2.30	2.12	0.10	.401
1.50	0.87	9.73	2.31	2.11	0.10	.400
1.55	0.88	9.84	2.32	2.12	0.10	.402
1.60	0.83	10.01	2.33	2.15	0.10	.406
1.65	0.64	10.26	2.34	2.20	0.10	.414
1.70	0.30	10.49	2.32	2.26	0.10	.424
1.75	-0.31	10.63	2.27	2.34	0.09	.438
1.80	-0.85	10.48	2.20	2.38	0.09	.447
1.85	-1.42	10.25	2.11	2.42	0.10	.457
1.90	-1.90	9.83	2.01	2.44	0.10	.464
1.95	-2.15	9.36	1.93	2.47	0.10	.466
2.00	-2.36	8.95	1.85	2.41	0.10	.468
2.05	-2.49	8.59	1.90	2.39	0.11	.469
2.10	-2.59	8.30	1.75	2.38	0.11	.470
2.15	-2.81	8.06	1.69	2.38	0.11	.476
2.20	-3.08	7.72	1.62	2.39	0.11	.484
2.25	-3.29	7.30	1.54	2.38	0.11	.491
2.30	-3.41	6.85	1.46	2.35	0.12	.496
2.35	-3.46	6.42	1.38	2.32	0.12	.499
2.40	-3.48	6.01	1.32	2.28	0.12	.502
2.45	-3.48	5.61	1.25	2.25	0.13	.505
2.50	-3.44	5.23	1.19	2.20	0.13	.507
2.60	-3.28	4.52	1.07	2.11	0.15	.508
2.70	-3.01	3.94	0.99	2.00	0.16	.502
2.80	-2.73	3.48	0.92	1.89	0.18	.494
2.90	-2.45	3.11	0.87	1.79	0.20	.481
3.00	-2.21	2.81	0.82	1.70	0.22	.469
3.10	-1.98	2.54	0.79	1.61	0.25	.456
3.20	-1.75	2.32	0.76	1.53	0.27	.440
3.30	-1.55	2.14	0.74	1.45	0.31	.423
3.40	-1.37	1.97	0.72	1.37	0.34	.407
3.50	-1.20	1.83	0.70	1.30	0.38	.388
3.60	-1.04	1.70	0.69	1.23	0.43	.369
3.70	-0.89	1.58	0.68	1.16	0.48	.349
3.80	-0.76	1.49	0.68	1.10	0.53	.328
3.90	-0.64	1.39	0.67	1.04	0.60	.309
4.00	-0.50	1.31	0.67	0.98	0.67	.284
4.10	-0.38	1.25	0.68	0.92	0.73	.259
4.20	-0.29	1.18	0.68	0.87	0.80	.239
4.30	-0.18	1.13	0.69	0.81	0.87	.213
4.40	-0.08	1.10	0.71	0.77	0.90	.191
4.50	-0.03	1.06	0.72	0.74	0.94	.178
4.60	0.04	1.02	0.73	0.70	0.98	.162
4.70	0.09	0.98	0.74	0.67	1.01	.149
4.80	0.15	0.94	0.74	0.63	1.04	.135
4.90	0.20	0.90	0.75	0.60	1.06	.124
5.00	0.25	0.86	0.76	0.56	1.08	.111
5.10	0.29	0.81	0.76	0.54	1.09	.101
5.20	0.34	0.77	0.77	0.50	1.09	.091
5.30	0.38	0.72	0.77	0.47	1.09	.080
5.40	0.42	0.67	0.78	0.43	1.07	.070
5.50	0.46	0.62	0.79	0.39	1.04	.060
5.60	0.51	0.56	0.80	0.35	0.97	.049
5.70	0.55	0.51	0.81	0.31	0.88	.039
5.80	0.62	0.45	0.83	0.27	0.77	.030



Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
5.90	0.67	0.40	0.87	0.23	0.63	.021
5.90	0.75	0.37	0.89	0.20	0.52	.015
5.10	0.81	0.31	0.92	0.17	0.42	.010
6.20	0.89	0.25	0.95	0.13	0.29	.005
5.30	0.98	0.21	0.99	0.11	0.21	.003
5.55	1.02	0.18	1.01	0.09	0.17	.002
6.40	1.07	0.15	1.04	0.07	0.13	.002
6.45	1.14	0.14	1.07	0.06	0.10	.002
6.50	1.21	0.13	1.10	0.06	0.09	.003
6.50	1.33	0.12	1.15	0.05	0.07	.006
6.70	1.49	0.14	1.22	0.06	0.06	.010
6.80	1.62	0.20	1.27	0.08	0.07	.015
6.90	1.74	0.30	1.32	0.11	0.10	.022
7.00	1.80	0.40	1.35	0.15	0.12	.026
7.10	1.85	0.50	1.37	0.18	0.14	.030
7.20	1.87	0.59	1.38	0.21	0.15	.034
7.30	1.88	0.67	1.39	0.24	0.17	.037
7.40	1.89	0.78	1.40	0.28	0.19	.041
7.50	1.85	0.85	1.39	0.30	0.20	.043
7.60	1.82	0.90	1.39	0.32	0.22	.044
7.70	1.79	0.94	1.38	0.34	0.23	.045
7.80	1.76	0.97	1.37	0.35	0.24	.046
7.90	1.73	1.00	1.37	0.36	0.25	.047
8.00	1.71	1.02	1.36	0.37	0.26	.047
8.10	1.69	1.03	1.36	0.38	0.26	.047
8.20	1.66	1.04	1.35	0.39	0.27	.048
8.30	1.66	1.05	1.35	0.39	0.27	.048
8.40	1.65	1.07	1.35	0.40	0.28	.049
8.50	1.64	1.08	1.34	0.40	0.28	.049
8.60	1.63	1.10	1.34	0.41	0.28	.050
8.70	1.62	1.11	1.34	0.41	0.29	.051
8.80	1.60	1.12	1.33	0.42	0.29	.051
8.90	1.59	1.13	1.33	0.43	0.30	.052
9.00	1.58	1.14	1.33	0.43	0.30	.052
9.10	1.57	1.15	1.33	0.43	0.30	.053
9.20	1.56	1.17	1.33	0.44	0.31	.054
9.30	1.54	1.19	1.32	0.45	0.31	.054
9.40	1.53	1.20	1.32	0.46	0.32	.055
9.50	1.51	1.21	1.31	0.46	0.32	.056
9.60	1.49	1.23	1.31	0.47	0.33	.057
9.70	1.47	1.24	1.30	0.47	0.34	.057
9.80	1.44	1.25	1.29	0.48	0.34	.058
9.90	1.42	1.26	1.29	0.49	0.35	.059
10.00	1.39	1.26	1.28	0.50	0.36	.059
10.10	1.36	1.26	1.27	0.50	0.37	.059
10.20	1.33	1.26	1.26	0.50	0.38	.060
10.30	1.30	1.25	1.25	0.50	0.38	.059
10.40	1.27	1.24	1.24	0.50	0.39	.059
10.50	1.23	1.22	1.22	0.50	0.41	.058
10.60	1.20	1.20	1.20	0.50	0.42	.057
11.00	1.17	1.18	1.19	0.50	0.43	.056
11.20	1.14	1.16	1.17	0.49	0.44	.055
11.40	1.11	1.14	1.16	0.49	0.45	.054
11.60	1.08	1.11	1.14	0.49	0.46	.053
11.80	1.05	1.08	1.13	0.48	0.48	.052
12.00	1.02	1.05	1.12	0.47	0.49	.050
12.20	0.99	1.01	1.10	0.46	0.50	.048

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
12.40	0.98	0.95	1.07	0.44	0.51	.045
12.60	0.98	0.92	1.08	0.43	0.51	.042
12.80	0.98	0.88	1.07	0.41	0.51	.039
13.00	0.98	0.84	1.07	0.39	0.50	.036
13.20	0.99	0.81	1.07	0.38	0.49	.034
13.40	1.00	0.77	1.07	0.36	0.48	.031
13.50	1.02	0.74	1.07	0.35	0.46	.029
13.60	1.04	0.72	1.07	0.33	0.45	.027
14.00	1.07	0.69	1.08	0.32	0.43	.025
14.20	1.09	0.67	1.09	0.31	0.41	.023
14.40	1.12	0.66	1.10	0.30	0.39	.022
14.60	1.16	0.66	1.12	0.29	0.37	.022
14.80	1.19	0.66	1.13	0.29	0.36	.022
15.00	1.22	0.67	1.14	0.29	0.35	.023
15.20	1.25	0.68	1.15	0.30	0.34	.024
15.40	1.27	0.71	1.17	0.30	0.34	.025
15.60	1.28	0.73	1.17	0.31	0.34	.026
15.80	1.29	0.76	1.18	0.32	0.34	.028
16.00	1.29	0.78	1.18	0.33	0.34	.029
16.20	1.29	0.81	1.19	0.34	0.35	.031
16.40	1.29	0.84	1.19	0.35	0.36	.032
16.60	1.27	0.86	1.19	0.36	0.36	.034
16.80	1.26	0.88	1.18	0.37	0.37	.035
17.00	1.24	0.91	1.18	0.38	0.38	.037
17.20	1.22	0.92	1.17	0.39	0.40	.038
17.40	1.19	0.93	1.16	0.40	0.41	.039
17.50	1.17	0.94	1.15	0.41	0.42	.040
17.60	1.14	0.95	1.15	0.41	0.43	.040
18.00	1.12	0.95	1.14	0.42	0.44	.041
18.20	1.09	0.95	1.13	0.42	0.45	.041
18.40	1.07	0.94	1.12	0.42	0.46	.041
18.60	1.05	0.94	1.11	0.42	0.47	.041
18.80	1.04	0.93	1.10	0.42	0.48	.041
19.00	1.02	0.92	1.10	0.42	0.49	.041
19.20	1.01	0.92	1.09	0.42	0.49	.041
19.40	0.99	0.91	1.08	0.42	0.50	.041
19.60	0.98	0.90	1.08	0.42	0.51	.041
19.80	0.97	0.90	1.07	0.42	0.52	.041
20.00	0.95	0.89	1.06	0.42	0.52	.041
20.20	0.94	0.89	1.06	0.42	0.53	.041
20.40	0.93	0.88	1.05	0.42	0.54	.041
20.60	0.92	0.88	1.05	0.42	0.54	.041
20.80	0.90	0.87	1.04	0.42	0.55	.041
21.00	0.89	0.87	1.03	0.42	0.56	.041
21.20	0.88	0.86	1.03	0.42	0.57	.041
21.40	0.86	0.86	1.02	0.42	0.58	.041
21.60	0.85	0.85	1.01	0.42	0.59	.042
21.80	0.84	0.84	1.01	0.42	0.60	.042
22.00	0.82	0.83	1.00	0.42	0.61	.042
22.20	0.81	0.82	0.99	0.42	0.62	.042
22.40	0.79	0.81	0.98	0.41	0.63	.042
22.60	0.78	0.80	0.97	0.41	0.64	.042
22.80	0.76	0.79	0.96	0.41	0.66	.042
23.00	0.75	0.77	0.95	0.41	0.67	.042
23.20	0.73	0.76	0.94	0.40	0.68	.041
23.40	0.72	0.74	0.94	0.39	0.69	.041
23.60	0.71	0.72	0.93	0.39	0.71	.041

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

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
23.20	0.71	0.59	0.92	0.33	0.71	.039
24.00	0.70	0.62	0.92	0.37	0.71	.034
24.20	0.70	0.66	0.91	0.36	0.71	.036
24.40	0.70	0.64	0.91	0.35	0.71	.035
24.60	0.70	0.63	0.91	0.34	0.71	.034
24.80	0.71	0.61	0.91	0.34	0.70	.032
25.00	0.71	0.60	0.90	0.33	0.69	.032
25.20	0.71	0.58	0.90	0.32	0.69	.030
25.40	0.72	0.57	0.90	0.31	0.68	.029
25.60	0.73	0.56	0.91	0.31	0.67	.024
25.80	0.73	0.55	0.91	0.30	0.66	.027
26.00	0.74	0.54	0.91	0.30	0.64	.026
26.20	0.75	0.53	0.91	0.24	0.63	.025
26.40	0.76	0.53	0.92	0.24	0.62	.024
26.50	0.76	0.53	0.92	0.29	0.61	.023
27.00	0.78	0.53	0.93	0.28	0.59	.023
27.50	0.76	0.54	0.93	0.24	0.60	.023
28.00	0.73	0.55	0.93	0.29	0.60	.024
28.50	0.77	0.56	0.93	0.30	0.62	.025
29.00	0.75	0.56	0.92	0.31	0.64	.027
29.50	0.73	0.56	0.91	0.31	0.67	.028
30.00	0.70	0.56	0.89	0.31	0.70	.030

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

publications by J.H. Weaver and C.G. Olson in Phys. Rev. B 15, 590 (1977) for energies above 4 eV and by J.H. Weaver and D.W. Lynch in Phys. Rev. B 7, 4737 (1973) for energies between 0.1 and 4.4 eV based on the following tabulation

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
0.10	-4478.50	2565.33	18.48	69.43	0.00	.986
0.10	-487.94	151.32	3.60	22.38	0.00	.972
0.15	-211.24	72.94	2.47	14.74	0.00	.957
0.20	-114.60	48.64	2.22	10.93	0.00	.932
0.22	-92.82	43.18	2.18	9.68	0.00	.919
0.24	-76.94	38.71	2.14	9.03	0.01	.906
0.26	-64.30	34.49	2.08	8.29	0.01	.894
0.28	-53.70	32.06	2.10	7.62	0.01	.876
0.30	-45.71	30.18	2.13	7.09	0.01	.858
0.32	-39.44	28.63	2.16	6.64	0.01	.840
0.34	-34.63	26.87	2.14	6.26	0.01	.825
0.36	-30.43	25.05	2.12	5.91	0.02	.810
0.38	-26.64	23.38	2.10	5.57	0.02	.794
0.40	-23.23	21.99	2.09	5.25	0.02	.775
0.42	-20.24	20.90	2.10	4.97	0.02	.755
0.44	-17.81	19.83	2.10	4.72	0.03	.736
0.46	-15.59	18.59	2.08	4.46	0.03	.717
0.48	-13.05	17.73	2.12	4.19	0.04	.689
0.50	-10.90	17.25	2.18	3.96	0.04	.661
0.52	-9.12	16.88	2.24	3.76	0.05	.636
0.54	-7.46	16.60	2.32	3.58	0.05	.611
0.56	-6.01	16.45	2.40	3.43	0.05	.589
0.58	-4.70	16.42	2.49	3.30	0.06	.568
0.60	-3.64	16.51	2.58	3.20	0.06	.553
0.62	-2.76	16.63	2.65	3.13	0.06	.542
0.64	-2.07	16.79	2.72	3.08	0.06	.534
0.66	-1.54	16.92	2.78	3.04	0.06	.528
0.68	-1.10	17.03	2.83	3.01	0.06	.523
0.70	-0.75	17.14	2.87	2.99	0.06	.520
0.72	-0.58	17.25	2.89	2.99	0.06	.519
0.74	-0.41	17.23	2.90	2.97	0.06	.517
0.76	-0.25	17.21	2.91	2.95	0.06	.515
0.78	-0.15	17.21	2.92	2.95	0.06	.514
0.80	-0.09	17.18	2.92	2.94	0.06	.513
0.82	-0.06	17.16	2.92	2.93	0.06	.513
0.84	-0.09	17.12	2.92	2.93	0.06	.513
0.86	-0.13	17.02	2.91	2.93	0.06	.512
0.88	-0.17	16.92	2.89	2.92	0.06	.512
0.90	-0.22	16.82	2.88	2.92	0.06	.511
0.92	-0.30	16.72	2.87	2.92	0.06	.511
0.94	-0.37	16.59	2.85	2.91	0.06	.511
0.96	-0.47	16.47	2.83	2.91	0.06	.511
0.98	-0.54	16.33	2.81	2.90	0.06	.510
1.00	-0.66	16.23	2.79	2.91	0.06	.511
1.05	-0.99	15.85	2.73	2.90	0.06	.511
1.10	-1.33	15.42	2.66	2.90	0.06	.512
1.15	-1.65	14.93	2.59	2.89	0.07	.512
1.20	-1.99	14.41	2.51	2.88	0.07	.512
1.25	-2.29	13.81	2.42	2.85	0.07	.512

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
1.30	-2.45	13.20	2.34	2.82	0.07	.510
1.35	-2.55	12.64	2.27	2.78	0.08	.507
1.40	-2.62	12.13	2.21	2.74	0.08	.504
1.45	-2.61	11.68	2.16	2.70	0.08	.500
1.50	-2.56	11.37	2.13	2.67	0.08	.496
1.55	-2.71	11.19	2.10	2.67	0.08	.498
1.60	-2.97	10.94	2.05	2.67	0.09	.502
1.65	-3.22	10.62	1.99	2.68	0.09	.506
1.70	-3.54	10.27	1.91	2.68	0.09	.512
1.75	-3.85	9.82	1.83	2.68	0.09	.519
1.80	-4.13	9.29	1.74	2.67	0.09	.525
1.85	-4.31	8.70	1.64	2.65	0.09	.530
1.90	-4.39	8.09	1.55	2.61	0.10	.534
1.95	-4.37	7.54	1.47	2.56	0.10	.534
2.00	-4.31	7.03	1.40	2.51	0.10	.534
2.05	-4.22	6.58	1.34	2.45	0.11	.534
2.10	-4.12	6.18	1.29	2.40	0.11	.532
2.15	-4.02	5.84	1.24	2.36	0.12	.531
2.20	-4.00	5.46	1.18	2.32	0.12	.535
2.25	-3.91	5.06	1.11	2.27	0.12	.537
2.30	-3.77	4.68	1.06	2.21	0.13	.535
2.35	-3.61	4.34	1.01	2.15	0.14	.534
2.40	-3.41	4.04	0.97	2.09	0.14	.529
2.45	-3.23	3.78	0.93	2.02	0.15	.523
2.50	-3.03	3.55	0.90	1.96	0.15	.516
2.60	-2.69	3.20	0.86	1.85	0.18	.500
2.70	-2.39	2.90	0.83	1.75	0.21	.484
2.80	-2.12	2.65	0.80	1.66	0.23	.467
2.90	-1.88	2.43	0.77	1.57	0.26	.450
3.00	-1.66	2.24	0.75	1.49	0.29	.432
3.10	-1.46	2.07	0.73	1.41	0.32	.414
3.20	-1.27	1.94	0.72	1.34	0.36	.392
3.30	-1.11	1.82	0.71	1.27	0.40	.372
3.40	-0.95	1.71	0.71	1.21	0.45	.352
3.50	-0.82	1.61	0.70	1.14	0.49	.333
3.60	-0.68	1.52	0.70	1.08	0.55	.310
3.70	-0.57	1.44	0.70	1.03	0.60	.290
3.80	-0.46	1.36	0.70	0.97	0.66	.270
3.90	-0.34	1.30	0.71	0.92	0.72	.248
4.00	-0.25	1.24	0.71	0.87	0.78	.227
4.10	-0.15	1.19	0.72	0.82	0.83	.205
4.20	-0.06	1.14	0.74	0.78	0.87	.187
4.30	0.02	1.11	0.75	0.74	0.90	.168
4.40	0.09	1.08	0.77	0.71	0.92	.153
4.50	0.14	1.06	0.78	0.68	0.93	.141
4.60	0.19	1.03	0.79	0.65	0.94	.131
4.70	0.23	1.00	0.79	0.63	0.95	.123
4.80	0.27	0.96	0.80	0.60	0.96	.113
4.90	0.30	0.93	0.80	0.58	0.97	.106
5.00	0.34	0.89	0.80	0.56	0.98	.098
5.10	0.35	0.85	0.80	0.53	1.00	.093
5.20	0.39	0.80	0.80	0.50	1.01	.083
5.30	0.43	0.75	0.90	0.47	1.01	.074
5.40	0.47	0.70	0.81	0.43	0.99	.065
5.50	0.51	0.65	0.81	0.40	0.96	.055
5.60	0.56	0.60	0.83	0.36	0.90	.046
5.70	0.60	0.55	0.84	0.33	0.83	.034

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

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
5.80	0.56	0.50	0.86	0.29	0.73	.029
5.90	0.72	0.46	0.89	0.26	0.63	.022
6.00	0.77	0.43	0.91	0.24	0.56	.018
6.10	0.82	0.38	0.93	0.21	0.47	.013
6.20	0.89	0.33	0.96	0.17	0.37	.008
6.30	0.97	0.29	1.00	0.15	0.29	.005
6.35	1.01	0.27	1.01	0.14	0.25	.004
6.40	1.06	0.26	1.04	0.12	0.22	.004
6.45	1.12	0.25	1.06	0.12	0.19	.004
6.50	1.17	0.25	1.09	0.11	0.17	.005
6.60	1.27	0.26	1.13	0.12	0.16	.007
6.70	1.35	0.25	1.17	0.11	0.13	.008
6.80	1.49	0.30	1.23	0.12	0.13	.013
6.90	1.58	0.38	1.27	0.15	0.15	.018
7.00	1.63	0.47	1.29	0.18	0.16	.022
7.10	1.66	0.57	1.31	0.22	0.18	.026
7.20	1.65	0.63	1.31	0.24	0.20	.029
7.30	1.66	0.69	1.32	0.26	0.21	.031
7.40	1.65	0.74	1.32	0.28	0.23	.033
7.50	1.64	0.78	1.32	0.30	0.24	.034
7.60	1.63	0.82	1.32	0.31	0.25	.036
7.70	1.62	0.85	1.31	0.32	0.25	.037
7.80	1.61	0.87	1.31	0.33	0.26	.038
7.90	1.59	0.89	1.31	0.34	0.27	.039
8.00	1.58	0.91	1.30	0.35	0.27	.039
8.10	1.57	0.92	1.30	0.35	0.28	.040
8.20	1.56	0.92	1.30	0.35	0.28	.039
8.30	1.57	0.94	1.30	0.36	0.28	.041
8.40	1.56	0.95	1.30	0.37	0.28	.041
8.50	1.56	0.97	1.30	0.37	0.29	.042
8.60	1.55	0.98	1.30	0.38	0.29	.043
8.70	1.55	0.99	1.30	0.38	0.29	.043
8.80	1.55	1.01	1.30	0.39	0.29	.045
8.90	1.55	1.03	1.31	0.39	0.30	.045
9.00	1.55	1.05	1.31	0.40	0.30	.047
9.10	1.54	1.07	1.31	0.41	0.31	.048
9.20	1.52	1.10	1.30	0.42	0.31	.049
9.30	1.51	1.11	1.30	0.43	0.32	.050
9.40	1.50	1.13	1.30	0.44	0.32	.051
9.50	1.48	1.15	1.29	0.44	0.33	.052
9.60	1.46	1.17	1.29	0.46	0.34	.053
9.70	1.43	1.19	1.28	0.46	0.34	.054
9.80	1.41	1.21	1.28	0.47	0.35	.055
9.90	1.38	1.22	1.27	0.48	0.36	.056
10.00	1.34	1.22	1.26	0.49	0.37	.057
10.10	1.31	1.23	1.25	0.49	0.38	.057
10.20	1.28	1.23	1.24	0.50	0.39	.058
10.30	1.25	1.22	1.22	0.50	0.40	.058
10.40	1.22	1.22	1.21	0.50	0.41	.058
10.50	1.17	1.19	1.19	0.50	0.43	.057
10.80	1.13	1.17	1.17	0.50	0.44	.056
11.00	1.09	1.14	1.16	0.49	0.46	.055
11.20	1.06	1.12	1.14	0.49	0.47	.054
11.40	1.02	1.09	1.12	0.49	0.49	.053
11.60	0.99	1.06	1.11	0.48	0.50	.051
11.80	0.97	1.02	1.09	0.47	0.52	.050
12.00	0.94	0.99	1.07	0.46	0.53	.048

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

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
12.20	0.93	0.94	1.06	0.44	0.54	.045
12.40	0.93	0.89	1.05	0.42	0.54	.042
12.60	0.93	0.86	1.05	0.41	0.54	.039
12.80	0.93	0.82	1.04	0.40	0.54	.036
13.00	0.93	0.78	1.04	0.38	0.53	.034
13.20	0.94	0.75	1.04	0.36	0.52	.031
13.40	0.96	0.72	1.04	0.35	0.50	.029
13.60	0.97	0.70	1.04	0.34	0.49	.027
13.80	0.99	0.67	1.05	0.32	0.47	.024
14.00	1.02	0.65	1.05	0.31	0.45	.023
14.20	1.04	0.63	1.06	0.30	0.43	.021
14.40	1.07	0.63	1.07	0.29	0.41	.021
14.60	1.10	0.62	1.09	0.29	0.39	.020
14.80	1.12	0.62	1.10	0.28	0.38	.020
15.00	1.15	0.63	1.11	0.28	0.37	.020
15.20	1.17	0.64	1.12	0.28	0.36	.021
15.40	1.19	0.65	1.13	0.29	0.35	.022
15.60	1.21	0.66	1.14	0.30	0.35	.023
15.80	1.22	0.70	1.15	0.31	0.35	.024
16.00	1.23	0.72	1.15	0.31	0.36	.026
16.20	1.23	0.75	1.15	0.32	0.36	.027
16.40	1.22	0.77	1.15	0.34	0.37	.029
16.60	1.21	0.80	1.15	0.34	0.38	.030
16.80	1.20	0.81	1.15	0.35	0.39	.031
17.00	1.18	0.83	1.15	0.36	0.40	.032
17.20	1.17	0.85	1.14	0.37	0.41	.033
17.40	1.15	0.86	1.14	0.38	0.42	.034
17.60	1.13	0.87	1.13	0.38	0.43	.035
17.80	1.10	0.87	1.12	0.39	0.44	.036
18.00	1.08	0.88	1.11	0.39	0.45	.036
18.20	1.07	0.87	1.11	0.40	0.46	.036
18.40	1.05	0.87	1.10	0.40	0.47	.037
18.60	1.03	0.87	1.09	0.40	0.48	.037
18.80	1.01	0.87	1.08	0.40	0.49	.037
19.00	1.00	0.86	1.08	0.40	0.50	.037
19.20	0.98	0.86	1.07	0.40	0.50	.037
19.40	0.97	0.85	1.06	0.40	0.51	.037
19.60	0.96	0.85	1.06	0.40	0.52	.037
19.80	0.95	0.84	1.05	0.40	0.52	.037
20.00	0.94	0.84	1.05	0.40	0.53	.037
20.20	0.93	0.83	1.04	0.40	0.54	.037
20.40	0.92	0.83	1.04	0.40	0.54	.038
20.60	0.90	0.83	1.03	0.40	0.55	.038
20.80	0.89	0.82	1.03	0.40	0.56	.038
21.00	0.88	0.82	1.02	0.40	0.57	.038
21.20	0.87	0.81	1.01	0.40	0.57	.039
21.40	0.86	0.81	1.01	0.40	0.58	.039
21.60	0.85	0.80	1.00	0.40	0.59	.038
21.80	0.83	0.80	1.00	0.40	0.60	.038
22.00	0.82	0.79	0.99	0.40	0.61	.039
22.20	0.81	0.79	0.99	0.40	0.62	.039
22.40	0.80	0.78	0.98	0.40	0.63	.039
22.60	0.78	0.77	0.97	0.40	0.64	.040
22.80	0.76	0.76	0.96	0.40	0.65	.040
23.00	0.75	0.75	0.95	0.39	0.67	.040
23.20	0.74	0.74	0.94	0.39	0.68	.040
23.40	0.73	0.72	0.94	0.38	0.69	.039

$\gamma \tilde{\epsilon} \hat{c}$

Energy (eV)	$\epsilon_1$	$\epsilon_2$	n	k	$\text{Im}(-1/\tilde{\epsilon})$	$R(\phi=0)$
23.50	0.72	0.70	0.93	0.38	0.69	.038
23.80	0.71	0.69	0.92	0.37	0.70	.038
24.00	0.71	0.67	0.92	0.37	0.70	.037
24.20	0.70	0.65	0.91	0.36	0.71	.036
24.40	0.70	0.64	0.91	0.35	0.71	.035
24.60	0.70	0.62	0.90	0.34	0.71	.034
24.80	0.70	0.61	0.90	0.34	0.70	.033
25.00	0.70	0.59	0.90	0.33	0.70	.032
25.20	0.71	0.58	0.90	0.32	0.69	.031
25.40	0.71	0.57	0.90	0.31	0.68	.029
25.60	0.72	0.56	0.90	0.31	0.67	.028
25.80	0.73	0.55	0.90	0.30	0.66	.027
26.00	0.73	0.55	0.91	0.30	0.65	.026
26.20	0.74	0.54	0.91	0.30	0.64	.025
26.40	0.75	0.54	0.91	0.29	0.63	.025
26.60	0.75	0.54	0.91	0.29	0.63	.025
27.00	0.77	0.53	0.92	0.29	0.61	.024
27.50	0.78	0.55	0.93	0.29	0.61	.024
28.00	0.77	0.56	0.93	0.30	0.62	.025
28.50	0.75	0.58	0.92	0.32	0.64	.028
29.00	0.72	0.59	0.91	0.33	0.68	.030
29.50	0.69	0.59	0.90	0.33	0.71	.032