

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks
				Film	X-tal	Bulk	Prep		
LFJ64	7.1-23.6	Ref1				x	Heat	R	
Ba66	0.6-2.6	Ellips	300-2400			x	Heat	n,k	cross-section filaments at various T
JLM68	2.15-23.09	Ref1				x	Heat	R; KK: n,k, ϵ_1 , ϵ_2	heated ~ 2600 K at $\sim 10^{-9}$ Torr
HRS69	30-600	Trans		x			Ex	μ	optical absorption measurements with synchrotron radiation
R 070	~ 25 - ~ 170	m-0						R,n, μ	
Hu71	6.2-41.3	Ref1		x			Ex	R	
CHR72	6.2-41.3	Ref1		x			Ex	R	
Log72					x			ϵ	emissivity
NKN73	0.08-4.13	Ellips	77, 295			x	EP	n,k, σ , ϵ_1	table λ ,n,k
Zho74			>1000					ϵ	emissivity
TT76	0.5-5	Ellips	4.2			x	Heat	ϵ_2 (interband)	~ 2000 K in uhv
W 9L Unpl	0.1-60	Ref1	4.2 K for $h\nu < 4.4$ eV RT for $h\nu > 4.4$ eV	x			EP	R; KK: n,k, ϵ_1 , ϵ_2 ; $\vec{E} \perp \hat{c}$ and $\vec{E} \parallel \hat{c}$	absorptivity measured by calorimetry for $h\nu < 4.4$ eV, reflectivity measured for $h\nu > 4.4$ eV with synchrotron radiation

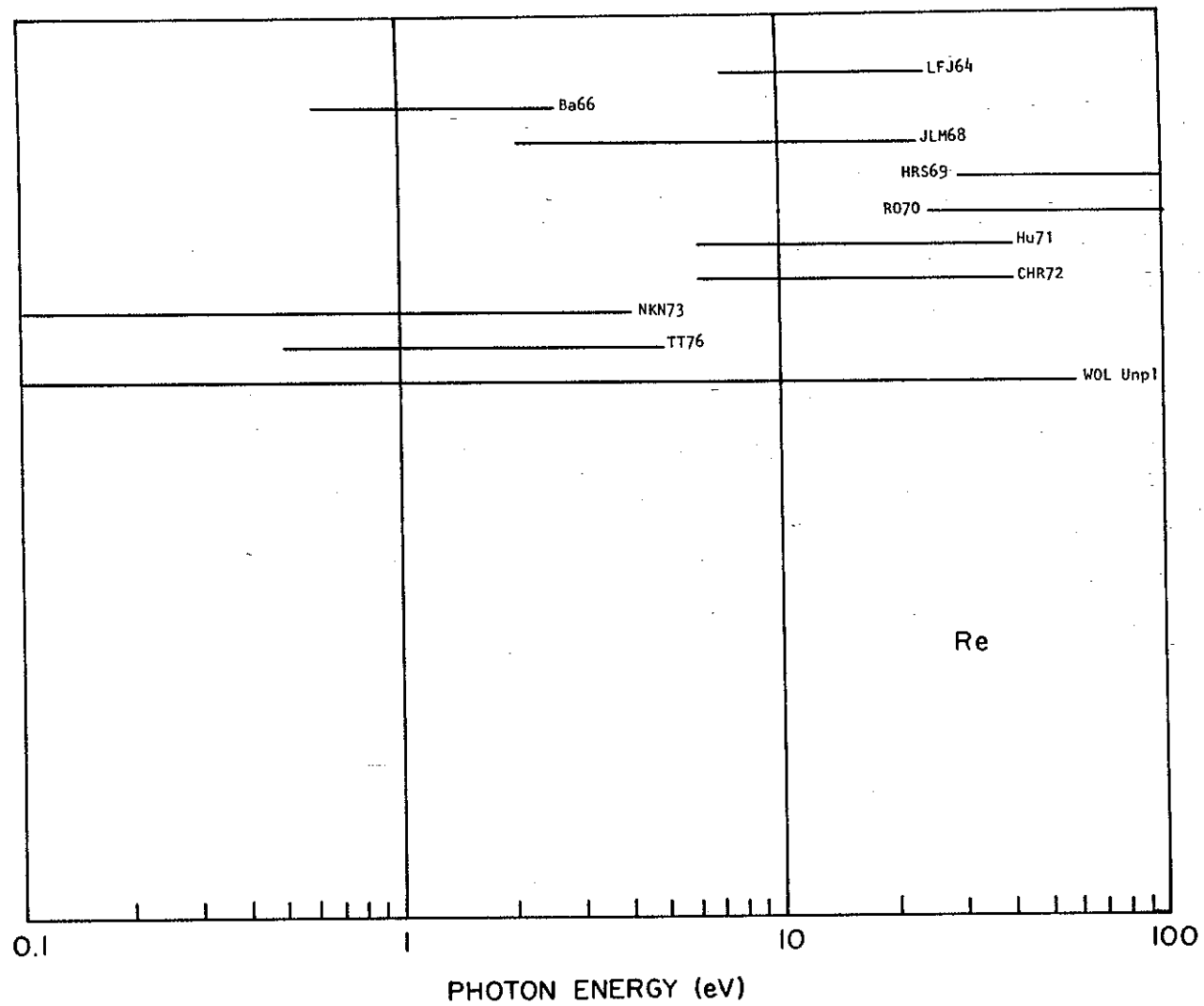


Fig. 84 Survey of available data for Re

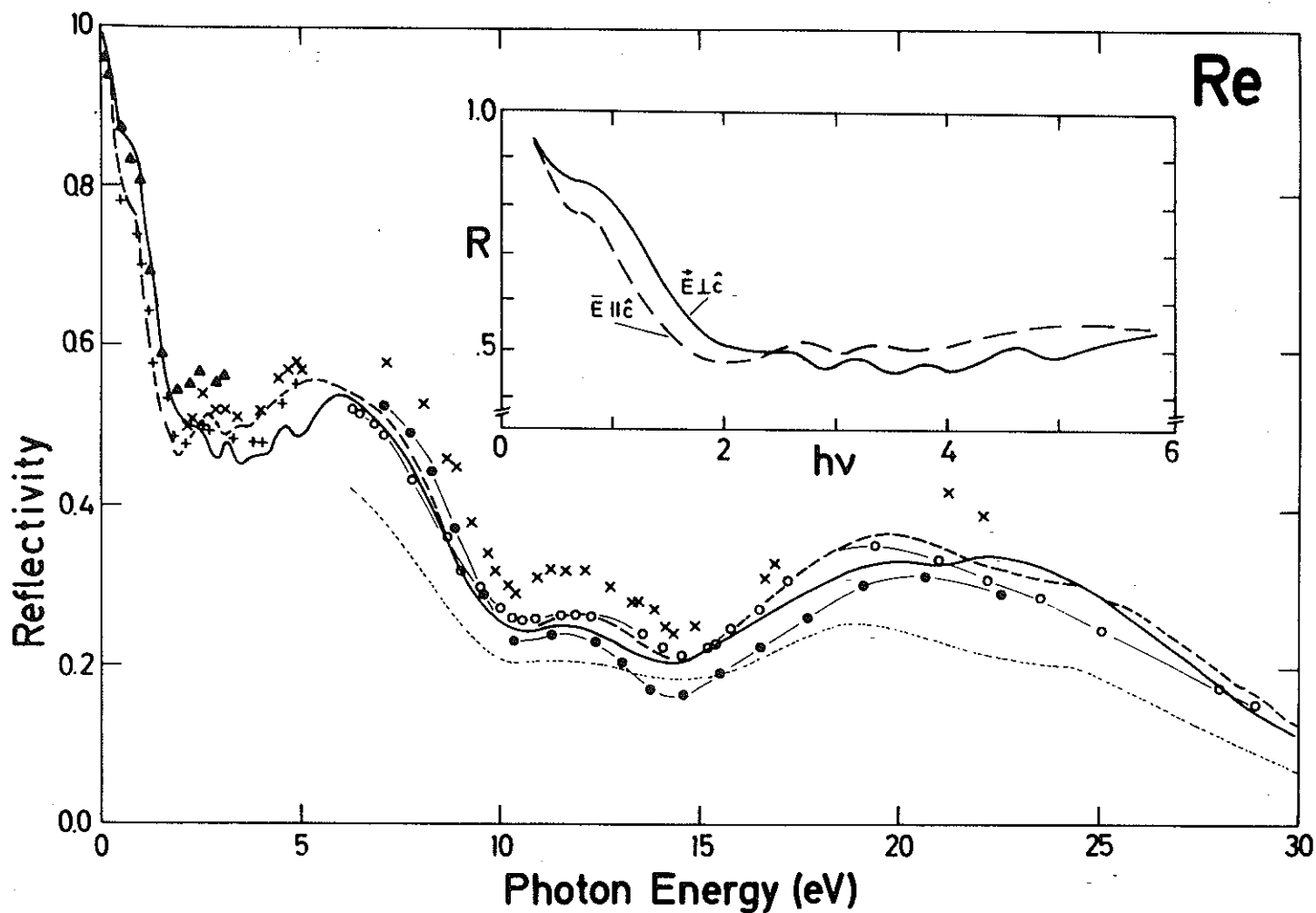


Fig. 85 Reflectivity for Re. Results for single crystal shown as --- for $\vec{E} \parallel \hat{c}$ and — for $\vec{E} \perp \hat{c}$ by LOW (unpub). Polycrystalline results as follows: ooo CHR72; xxx JLM68; --- Hu71; +++ TT76; $\blacktriangle\blacktriangle\blacktriangle$ NKN73; $\bullet\bullet\bullet$ LFJ64.

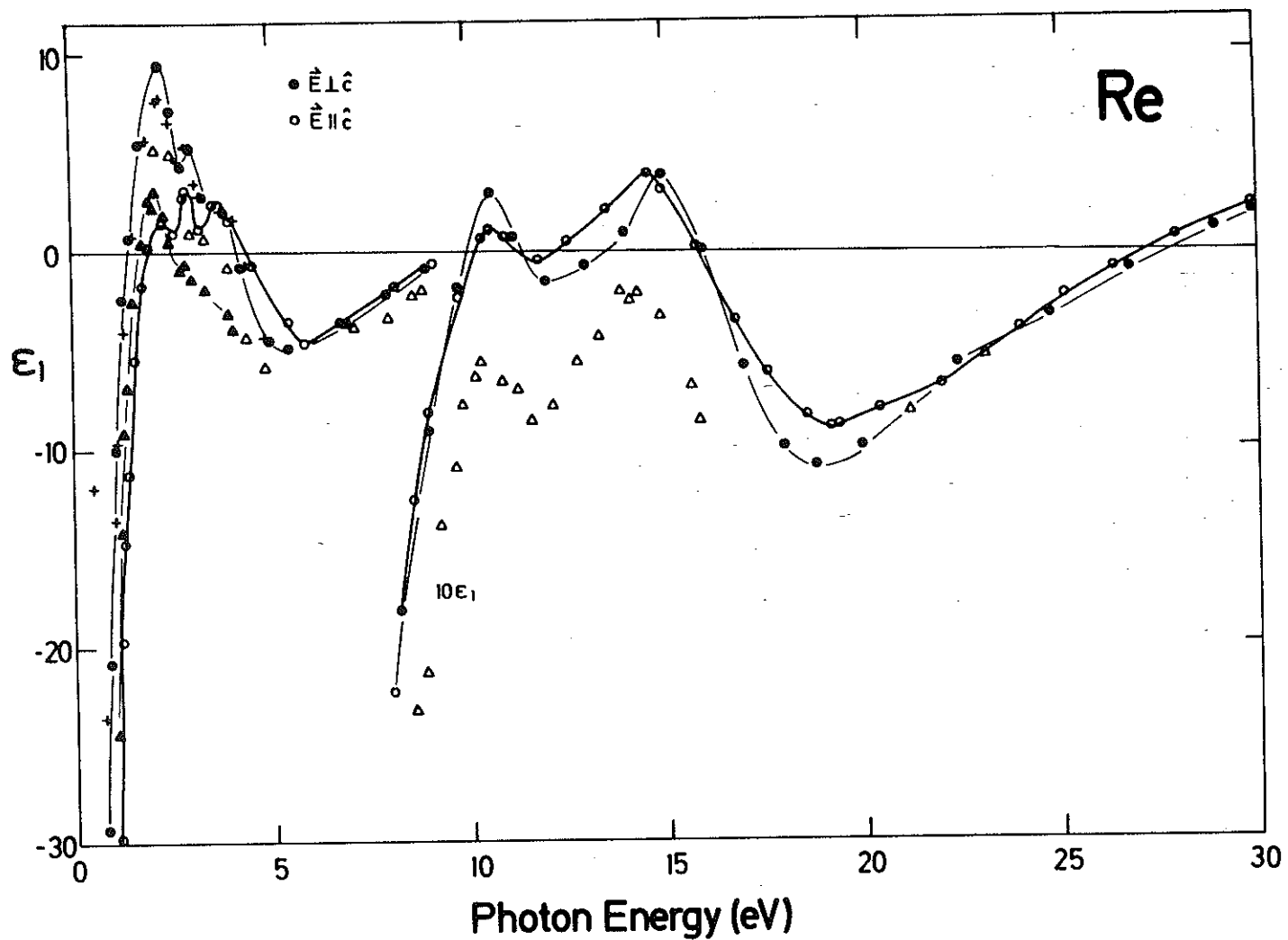


Fig. 86

ϵ_1 for Re. Single crystal results shown as $\bullet\bullet\bullet$ for $\vec{\epsilon}_{\parallel \hat{c}}$ and $\circ\circ\circ$ for $\vec{\epsilon}_{\perp \hat{c}}$ by LOW (unpub). Polycrystalline results as follows: $+++$ TT76; $\blacktriangle\blacktriangle\blacktriangle$ NKN73; $\triangle\triangle\triangle$ JLM68.

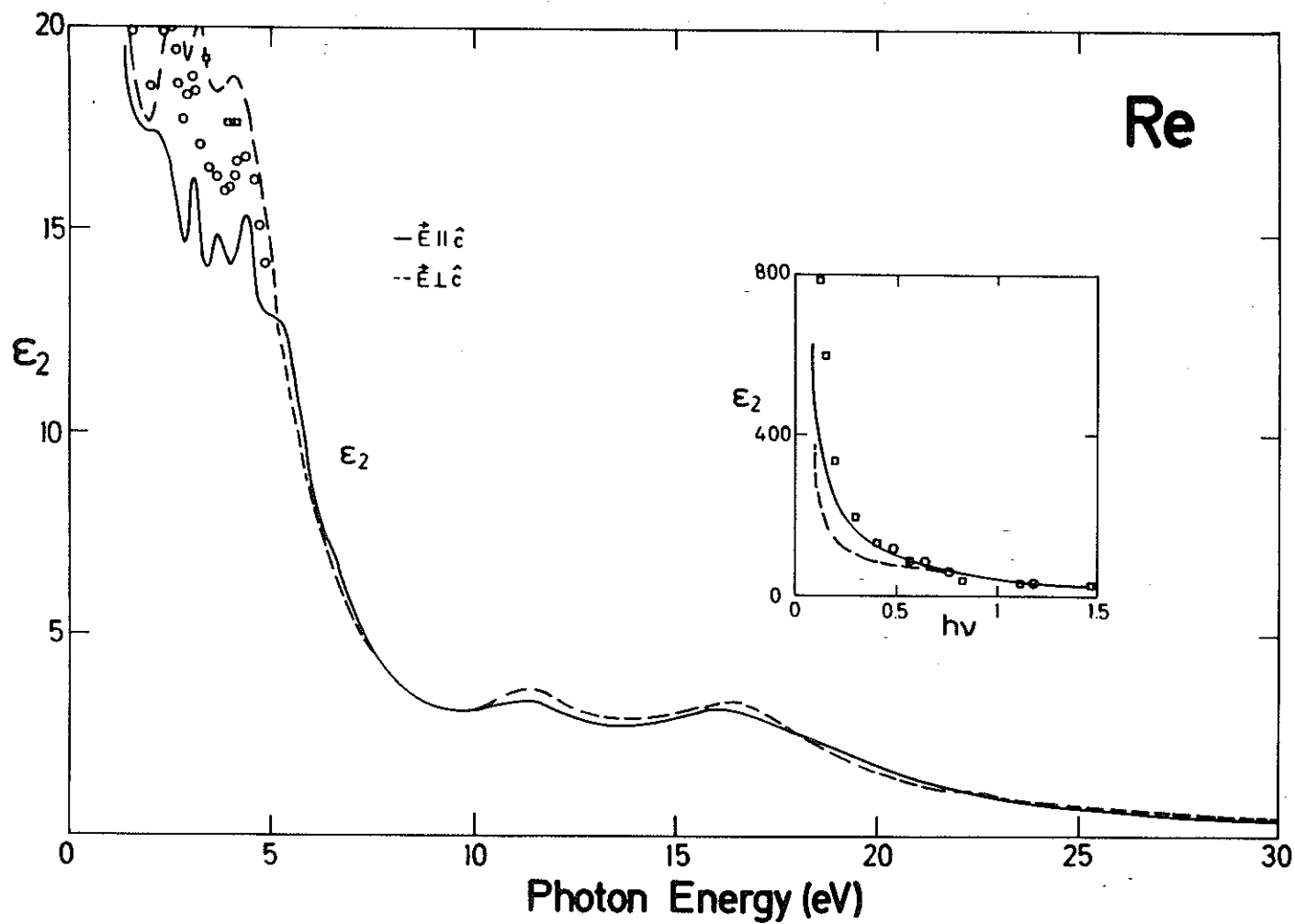


Fig. 87 ϵ_2 for Re. Single crystal shown as --- for $\vec{E} \parallel \hat{c}$ and — for $\vec{E} \perp \hat{c}$ by LOW (unpub). Polycrystalline results as follows: ooo TT76; □□□NKN73.

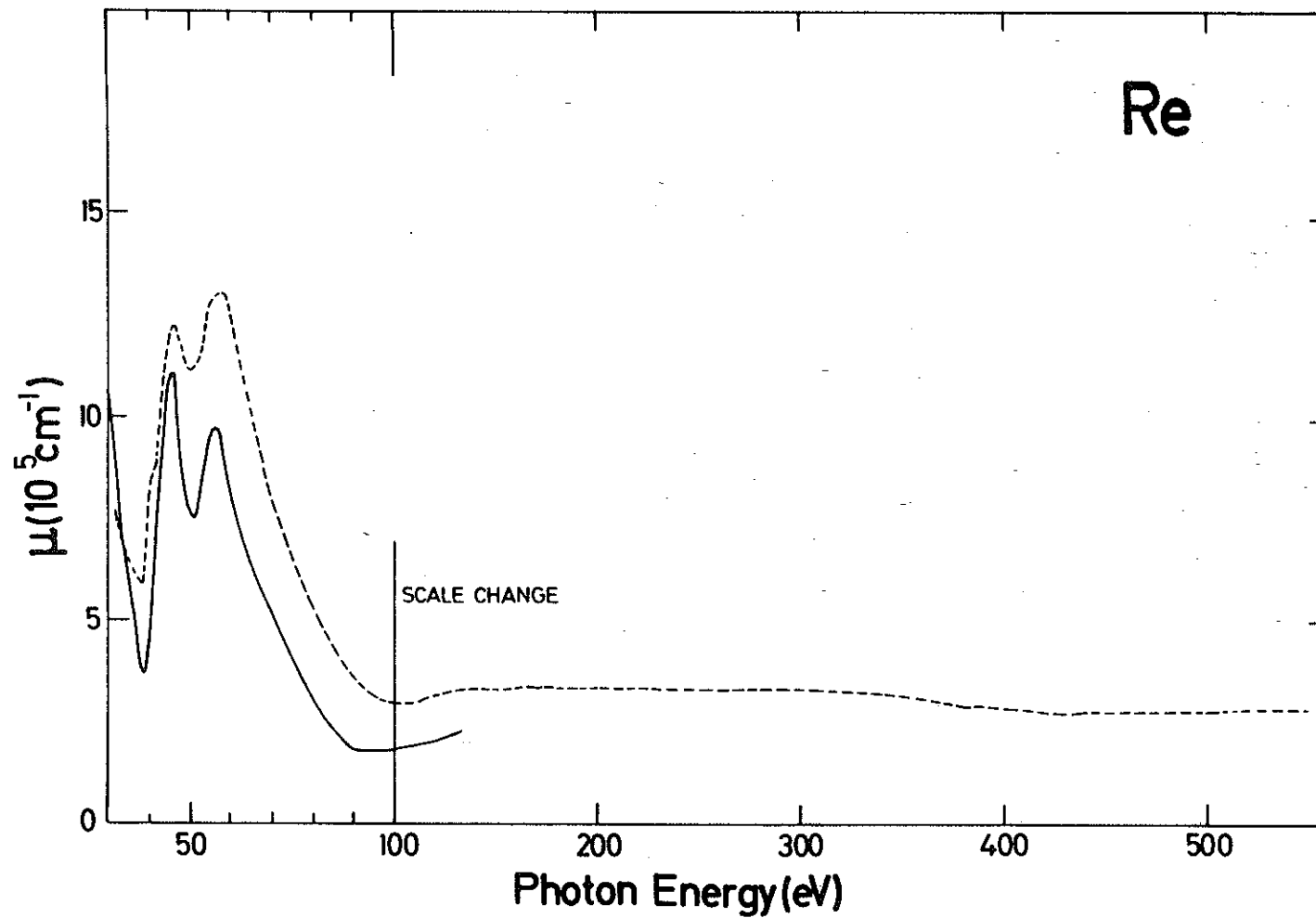


Fig. 88 Absorption coefficient for Re: --- HRS69; — Ro70.

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

J.H. Weaver, C.G. Olson, and D.W. Lynch, unpublished

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-2567.21	618.75	6.06	51.03	0.00	.991
0.15	-1131.18	316.57	4.60	33.96	0.00	.984
0.20	-625.69	211.18	4.16	25.36	0.00	.975
0.25	-387.89	162.12	4.03	20.10	0.00	.962
0.30	-259.57	145.83	4.37	16.69	0.00	.943
0.35	-190.79	130.66	4.50	14.53	0.00	.925
0.40	-147.43	117.49	4.53	12.96	0.00	.909
0.45	-118.24	106.71	4.53	11.79	0.00	.893
0.50	-97.87	98.71	4.53	10.88	0.01	.878
0.55	-84.97	92.21	4.50	10.26	0.01	.867
0.57	-81.69	87.74	4.37	10.04	0.01	.865
0.60	-76.71	83.69	4.29	9.75	0.01	.861
0.63	-73.32	80.24	4.20	9.54	0.01	.858
0.65	-70.85	76.15	4.07	9.35	0.01	.856
0.68	-68.03	72.02	3.94	9.14	0.01	.854
0.70	-65.56	67.94	3.80	8.94	0.01	.853
0.73	-63.19	63.88	3.65	8.75	0.01	.851
0.75	-60.93	59.48	3.48	8.55	0.01	.850
0.77	-57.93	55.60	3.34	8.31	0.01	.848
0.80	-55.33	52.02	3.21	8.10	0.01	.846
0.85	-50.17	45.38	2.96	7.68	0.01	.841
0.90	-44.94	39.49	2.73	7.24	0.01	.835
0.95	-39.54	34.75	2.56	6.79	0.01	.826
1.00	-34.42	31.18	2.45	6.36	0.01	.813
1.05	-29.81	28.56	2.39	5.96	0.02	.797
1.10	-25.84	26.68	2.38	5.61	0.02	.778
1.15	-22.65	25.04	2.36	5.31	0.02	.761
1.20	-19.70	23.61	2.35	5.02	0.02	.742
1.25	-17.00	22.58	2.37	4.76	0.03	.721
1.30	-14.85	21.71	2.39	4.54	0.03	.702
1.35	-12.93	20.85	2.41	4.33	0.03	.683
1.40	-11.12	20.12	2.44	4.13	0.04	.662
1.45	-9.56	19.49	2.46	3.95	0.04	.643
1.50	-8.11	18.92	2.50	3.79	0.04	.624
1.55	-6.74	18.44	2.54	3.63	0.05	.605
1.60	-5.49	18.06	2.59	3.49	0.05	.587
1.65	-4.30	17.81	2.65	3.36	0.05	.570
1.70	-3.37	17.65	2.70	3.27	0.05	.557
1.75	-2.43	17.50	2.76	3.17	0.06	.544
1.80	-1.69	17.50	2.82	3.10	0.06	.535
1.85	-1.12	17.46	2.86	3.05	0.06	.527
1.90	-0.56	17.39	2.90	3.00	0.06	.520
1.95	-0.11	17.37	2.94	2.96	0.06	.515
2.00	0.33	17.32	2.97	2.91	0.06	.510
2.05	0.65	17.35	3.00	2.89	0.06	.507
2.10	0.94	17.33	3.03	2.86	0.06	.504
2.15	1.18	17.35	3.05	2.85	0.06	.502
2.20	1.32	17.37	3.06	2.84	0.06	.501
2.25	1.40	17.35	3.07	2.83	0.06	.500

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ $\tilde{\epsilon}$)	R($\phi=0$)
2.30	1.46	17.31	3.07	2.82	0.06	.499
2.35	1.51	17.25	3.07	2.81	0.06	.498
2.40	1.48	17.23	3.06	2.81	0.06	.498
2.45	1.37	17.13	3.05	2.81	0.06	.498
2.50	1.25	16.93	3.02	2.80	0.06	.497
2.55	1.18	16.68	2.99	2.79	0.06	.495
2.60	1.08	16.40	2.96	2.77	0.06	.493
2.65	1.03	16.00	2.92	2.74	0.06	.489
2.70	1.19	15.53	2.89	2.68	0.06	.482
2.75	1.45	15.16	2.89	2.63	0.07	.475
2.80	1.78	14.87	2.89	2.57	0.07	.468
2.85	2.31	14.65	2.93	2.50	0.07	.460
2.90	2.86	14.79	2.99	2.47	0.07	.457
2.95	3.23	15.24	3.07	2.48	0.06	.460
3.00	3.07	15.93	3.11	2.57	0.06	.470
3.05	2.62	16.22	3.09	2.63	0.06	.477
3.10	2.08	16.26	3.04	2.67	0.06	.482
3.15	1.57	16.03	2.97	2.70	0.06	.484
3.20	1.24	15.57	2.90	2.68	0.06	.482
3.25	1.19	15.02	2.85	2.63	0.07	.476
3.30	1.36	14.60	2.83	2.58	0.07	.469
3.35	1.53	14.36	2.83	2.54	0.07	.464
3.40	1.76	14.17	2.83	2.50	0.07	.459
3.50	2.31	14.06	2.88	2.44	0.07	.452
3.60	2.45	14.52	2.93	2.48	0.07	.457
3.70	1.99	14.88	2.91	2.55	0.07	.466
3.80	1.59	14.64	2.86	2.56	0.07	.467
3.90	1.48	14.31	2.82	2.54	0.07	.464
4.00	1.60	14.11	2.81	2.51	0.07	.460
4.10	1.75	14.23	2.84	2.51	0.07	.460
4.20	1.66	14.63	2.86	2.55	0.07	.466
4.30	1.20	15.11	2.86	2.64	0.07	.477
4.40	0.38	15.36	2.81	2.74	0.07	.489
4.50	-0.65	15.19	2.70	2.82	0.07	.500
4.60	-1.42	14.50	2.56	2.83	0.07	.504
4.70	-1.68	13.66	2.46	2.78	0.07	.501
4.80	-1.57	13.07	2.41	2.71	0.08	.493
4.90	-1.43	12.82	2.39	2.68	0.08	.488
5.00	-1.44	12.81	2.39	2.68	0.08	.488
5.10	-1.69	12.86	2.38	2.71	0.08	.493
5.20	-2.09	12.83	2.34	2.75	0.08	.500
5.30	-2.59	12.66	2.27	2.79	0.08	.508
5.40	-3.05	12.37	2.20	2.81	0.08	.515
5.50	-3.56	11.99	2.12	2.83	0.08	.523
5.60	-4.00	11.45	2.02	2.84	0.08	.530
5.70	-4.27	10.85	1.92	2.82	0.08	.534
5.80	-4.49	10.27	1.83	2.80	0.08	.538
5.90	-4.67	9.62	1.74	2.77	0.08	.542
6.00	-4.65	8.95	1.65	2.71	0.09	.541
6.20	-4.33	7.99	1.54	2.59	0.10	.532
6.40	-4.13	7.26	1.45	2.50	0.10	.526
6.80	-3.61	6.11	1.32	2.31	0.12	.508
7.00	-3.39	5.64	1.26	2.23	0.13	.500
7.20	-3.18	5.18	1.20	2.15	0.14	.493
7.40	-2.91	4.79	1.16	2.06	0.15	.480
7.60	-2.70	4.43	1.12	1.99	0.16	.470
7.80	-2.42	4.09	1.08	1.89	0.18	.454

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ ϵ)	R($\phi=0$)
8.00	-2.14	3.79	1.05	1.80	0.20	.435
8.20	-1.82	3.57	1.05	1.71	0.22	.411
8.40	-1.53	3.41	1.05	1.62	0.24	.386
8.60	-1.26	3.29	1.06	1.55	0.27	.360
8.80	-1.01	3.22	1.09	1.48	0.28	.336
9.00	-0.82	3.18	1.11	1.43	0.29	.317
9.20	-0.65	3.13	1.13	1.39	0.31	.301
9.40	-0.44	3.11	1.16	1.34	0.32	.281
9.60	-0.35	3.14	1.18	1.32	0.31	.274
9.80	-0.24	3.11	1.20	1.29	0.32	.264
10.00	-0.09	3.10	1.23	1.26	0.32	.252
10.20	0.00	3.14	1.25	1.25	0.32	.246
10.40	0.07	3.18	1.28	1.25	0.31	.242
10.60	0.11	3.24	1.29	1.25	0.31	.242
10.80	0.11	3.29	1.30	1.26	0.30	.244
11.00	0.08	3.31	1.30	1.27	0.30	.247
11.20	0.04	3.30	1.29	1.28	0.30	.249
11.40	-0.01	3.28	1.28	1.28	0.31	.252
11.60	-0.05	3.21	1.26	1.28	0.31	.252
11.80	-0.06	3.12	1.24	1.26	0.32	.249
12.00	-0.03	3.05	1.23	1.24	0.33	.244
12.20	0.00	3.00	1.22	1.23	0.33	.241
12.40	0.02	2.95	1.22	1.21	0.34	.237
12.60	0.05	2.91	1.22	1.20	0.34	.233
12.80	0.07	2.88	1.21	1.18	0.35	.230
13.00	0.11	2.84	1.22	1.17	0.35	.225
13.20	0.14	2.82	1.22	1.16	0.35	.227
13.40	0.18	2.79	1.22	1.14	0.36	.218
13.60	0.21	2.78	1.22	1.13	0.36	.215
13.80	0.24	2.77	1.23	1.13	0.36	.212
14.00	0.28	2.77	1.24	1.12	0.36	.209
14.20	0.32	2.78	1.25	1.11	0.36	.206
14.40	0.37	2.81	1.27	1.11	0.35	.204
14.60	0.40	2.88	1.29	1.12	0.34	.206
14.80	0.36	2.97	1.29	1.15	0.33	.213
15.00	0.31	3.01	1.29	1.16	0.33	.218
15.20	0.24	3.06	1.29	1.19	0.33	.225
15.40	0.18	3.07	1.27	1.20	0.32	.230
15.60	0.10	3.08	1.26	1.22	0.32	.236
15.80	0.03	3.08	1.25	1.24	0.32	.241
16.00	-0.05	3.08	1.23	1.25	0.32	.248
16.20	-0.14	3.06	1.21	1.26	0.33	.254
16.40	-0.21	3.02	1.19	1.27	0.33	.259
16.60	-0.29	2.99	1.16	1.28	0.33	.264
16.80	-0.36	2.94	1.14	1.29	0.33	.269
17.60	-0.62	2.71	1.04	1.30	0.35	.291
17.00	-0.44	2.90	1.12	1.30	0.34	.275
17.20	-0.50	2.84	1.09	1.30	0.34	.280
17.40	-0.56	2.78	1.07	1.30	0.35	.286
17.80	-0.68	2.64	1.01	1.30	0.36	.296
18.00	-0.72	2.56	0.99	1.30	0.36	.300
18.20	-0.76	2.49	0.96	1.30	0.37	.305
18.40	-0.81	2.40	0.93	1.29	0.37	.311
18.60	-0.84	2.32	0.90	1.29	0.38	.316
18.80	-0.87	2.23	0.87	1.28	0.39	.321
19.00	-0.89	2.13	0.84	1.27	0.40	.325
19.20	-0.90	2.04	0.81	1.25	0.41	.330

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ $\tilde{\epsilon}$)	R($\phi=0$)
19.40	-0.90	1.94	0.79	1.23	0.42	.332
19.60	-0.88	1.86	0.77	1.21	0.44	.332
19.80	-0.87	1.78	0.75	1.19	0.45	.333
20.00	-0.85	1.71	0.73	1.18	0.47	.333
20.20	-0.83	1.65	0.71	1.16	0.48	.333
20.40	-0.81	1.59	0.70	1.14	0.50	.332
20.80	-0.77	1.48	0.67	1.11	0.53	.332
21.20	-0.75	1.38	0.64	1.08	0.56	.334
21.60	-0.71	1.28	0.61	1.04	0.60	.335
22.00	-0.69	1.18	0.58	1.01	0.63	.340
22.40	-0.64	1.08	0.55	0.97	0.69	.341
22.80	-0.58	0.99	0.53	0.93	0.75	.338
23.20	-0.53	0.91	0.51	0.89	0.82	.334
23.60	-0.47	0.84	0.50	0.85	0.91	.329
24.00	-0.41	0.78	0.48	0.80	1.01	.319
24.40	-0.35	0.73	0.48	0.76	1.12	.307
24.80	-0.30	0.68	0.47	0.72	1.23	.296
25.20	-0.24	0.64	0.47	0.68	1.36	.282
25.60	-0.19	0.61	0.47	0.65	1.49	.270
26.00	-0.15	0.58	0.47	0.61	1.63	.255
26.40	-0.10	0.55	0.48	0.57	1.77	.240
26.80	-0.06	0.52	0.48	0.54	1.90	.225
27.20	-0.02	0.50	0.49	0.51	2.00	.208
27.60	0.02	0.48	0.50	0.48	2.09	.193
28.00	0.06	0.46	0.51	0.45	2.13	.176
29.00	0.14	0.42	0.54	0.39	2.15	.145
30.00	0.22	0.38	0.57	0.33	1.98	.114
31.00	0.30	0.35	0.62	0.29	1.66	.086
32.00	0.37	0.34	0.66	0.26	1.37	.065
32.50	0.38	0.34	0.67	0.25	1.29	.060
33.00	0.41	0.32	0.68	0.24	1.19	.054
34.00	0.48	0.31	0.72	0.21	0.96	.041
35.00	0.54	0.31	0.76	0.20	0.80	.031
36.00	0.59	0.31	0.79	0.20	0.71	.025
37.00	0.64	0.32	0.82	0.19	0.63	.021
38.00	0.69	0.34	0.85	0.20	0.58	.018
39.00	0.74	0.36	0.89	0.21	0.55	.016
40.00	0.71	0.46	0.88	0.26	0.64	.022
41.00	0.70	0.45	0.87	0.26	0.65	.023
42.00	0.71	0.45	0.88	0.26	0.64	.022
43.00	0.72	0.47	0.89	0.27	0.64	.023
44.00	0.71	0.51	0.89	0.29	0.67	.026
45.00	0.67	0.54	0.88	0.31	0.73	.031
46.00	0.62	0.54	0.85	0.32	0.79	.035
47.00	0.60	0.51	0.83	0.31	0.83	.036
48.00	0.59	0.50	0.82	0.30	0.84	.036
49.00	0.57	0.49	0.81	0.30	0.86	.037
50.00	0.56	0.48	0.80	0.30	0.89	.038
51.00	0.54	0.48	0.79	0.30	0.92	.040
52.00	0.51	0.47	0.78	0.30	0.98	.044
53.00	0.48	0.46	0.75	0.30	1.05	.048
54.00	0.43	0.43	0.72	0.30	1.17	.055
55.00	0.39	0.38	0.69	0.27	1.27	.060
56.00	0.38	0.32	0.66	0.24	1.29	.061
57.00	0.38	0.26	0.65	0.20	1.23	.059
58.00	0.39	0.21	0.65	0.16	1.05	.055
59.00	0.41	0.16	0.65	0.12	0.83	.050

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

D.W. Lynch, C.G. Olson, and J.H. Weaver (unpub)

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-1816.64	364.47	4.25	42.83	0.00	.991
0.15	-778.04	184.09	3.28	28.08	0.00	.984
0.20	-416.01	135.30	3.28	20.66	0.00	.971
0.25	-252.76	112.85	3.47	16.27	0.00	.951
0.30	-166.75	100.42	3.73	13.44	0.00	.926
0.35	-117.68	90.77	3.93	11.54	0.00	.900
0.40	-87.19	81.09	3.99	10.15	0.01	.875
0.45	-64.14	75.32	4.17	9.03	0.01	.846
0.50	-49.42	71.64	4.34	8.26	0.01	.821
0.55	-39.90	68.74	4.45	7.73	0.01	.801
0.57	-36.37	67.84	4.51	7.53	0.01	.793
0.60	-34.27	67.07	4.53	7.40	0.01	.788
0.63	-33.09	66.05	4.52	7.31	0.01	.785
0.65	-33.00	64.42	4.44	7.26	0.01	.784
0.68	-33.13	61.88	4.30	7.19	0.01	.784
0.70	-33.19	58.56	4.13	7.09	0.01	.784
0.73	-32.61	54.74	3.94	6.94	0.01	.783
0.75	-31.33	50.88	3.77	6.75	0.01	.779
0.77	-29.27	47.60	3.65	6.53	0.02	.773
0.80	-27.40	44.91	3.55	6.32	0.02	.766
0.85	-23.91	40.40	3.39	5.95	0.02	.752
0.90	-20.77	36.58	3.26	5.61	0.02	.737
0.95	-17.72	33.37	3.17	5.27	0.02	.719
1.00	-14.99	30.65	3.09	4.96	0.03	.701
1.05	-12.20	28.48	3.07	4.65	0.03	.678
1.10	-10.00	26.74	3.05	4.39	0.03	.658
1.15	-7.84	25.17	3.04	4.14	0.04	.636
1.20	-5.70	23.97	3.08	3.89	0.04	.613
1.25	-3.85	23.22	3.14	3.70	0.04	.593
1.30	-2.42	22.78	3.20	3.56	0.04	.578
1.35	-1.49	22.43	3.24	3.46	0.04	.567
1.40	-0.98	21.87	3.23	3.38	0.05	.559
1.45	-0.23	20.94	3.22	3.25	0.05	.546
1.50	0.69	20.14	3.23	3.12	0.05	.532
1.55	1.52	19.53	3.25	3.01	0.05	.520
1.60	2.51	18.93	3.29	2.88	0.05	.507
1.65	3.29	18.67	3.34	2.80	0.05	.494
1.70	4.03	18.34	3.38	2.72	0.05	.491
1.75	4.71	18.14	3.42	2.65	0.05	.485
1.80	5.38	17.99	3.47	2.59	0.05	.480
1.85	5.75	18.05	3.51	2.57	0.05	.479
1.90	6.27	17.69	3.54	2.50	0.05	.473
1.95	6.82	17.68	3.59	2.46	0.05	.471
2.00	7.33	17.64	3.63	2.43	0.05	.469
2.05	7.82	17.75	3.69	2.41	0.05	.469
2.10	8.21	17.92	3.74	2.40	0.05	.470
2.15	8.55	18.07	3.78	2.39	0.05	.471
2.20	8.96	18.23	3.83	2.38	0.04	.472
2.25	9.33	18.67	3.89	2.40	0.04	.476

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ $\tilde{\epsilon}$)	R($\phi=0$)
2.30	9.48	19.20	3.93	2.44	0.04	.481
2.35	9.60	19.63	3.97	2.47	0.04	.485
2.40	9.52	20.36	4.00	2.55	0.04	.492
2.45	9.31	20.87	4.01	2.60	0.04	.497
2.50	8.78	21.66	4.01	2.70	0.04	.505
2.55	8.01	22.02	3.96	2.78	0.04	.510
2.60	7.16	22.19	3.90	2.84	0.04	.514
2.65	6.34	22.09	3.83	2.88	0.04	.516
2.70	5.52	21.83	3.74	2.92	0.04	.517
2.75	4.87	21.28	3.65	2.91	0.04	.515
2.80	4.46	20.61	3.57	2.88	0.05	.511
2.85	4.32	19.90	3.51	2.83	0.05	.505
2.90	4.62	19.25	3.49	2.75	0.05	.497
2.95	4.93	19.11	3.51	2.72	0.05	.494
3.00	5.16	19.12	3.53	2.71	0.05	.493
3.05	5.29	19.28	3.56	2.71	0.05	.494
3.10	5.28	19.57	3.57	2.74	0.05	.497
3.15	4.99	19.94	3.57	2.79	0.05	.502
3.20	4.53	20.11	3.55	2.84	0.05	.506
3.25	3.98	20.12	3.50	2.88	0.05	.509
3.30	3.50	19.93	3.44	2.89	0.05	.510
3.35	3.07	19.65	3.39	2.90	0.05	.510
3.40	2.81	19.26	3.34	2.88	0.05	.508
3.50	2.67	18.65	3.28	2.84	0.05	.503
3.60	2.57	18.38	3.25	2.83	0.05	.501
3.70	2.60	18.20	3.24	2.81	0.05	.499
3.80	2.44	18.38	3.24	2.84	0.05	.502
3.90	2.05	18.58	3.22	2.88	0.05	.507
4.00	1.49	18.74	3.19	2.94	0.05	.513
4.10	0.75	18.81	3.13	3.01	0.05	.520
4.20	-0.03	18.68	3.05	3.06	0.05	.526
4.30	-0.82	18.45	2.97	3.11	0.05	.532
4.40	-1.64	18.09	2.88	3.15	0.05	.539
4.50	-2.39	17.57	2.77	3.17	0.06	.544
4.60	-3.03	16.97	2.67	3.18	0.06	.548
4.70	-3.70	16.29	2.55	3.19	0.06	.553
4.80	-4.08	15.48	2.44	3.17	0.06	.554
4.90	-4.38	14.76	2.35	3.14	0.06	.555
5.00	-4.64	14.04	2.25	3.12	0.06	.556
5.10	-4.74	13.36	2.17	3.08	0.07	.555
5.20	-4.86	12.74	2.10	3.04	0.07	.555
5.30	-4.92	12.14	2.02	3.00	0.07	.554
5.40	-4.94	11.60	1.96	2.96	0.07	.553
5.50	-4.95	11.08	1.89	2.92	0.08	.552
5.60	-4.95	10.60	1.84	2.88	0.08	.551
5.70	-4.94	10.13	1.78	2.85	0.08	.550
5.80	-4.91	9.70	1.73	2.81	0.08	.549
5.90	-4.91	9.27	1.67	2.78	0.08	.549
6.00	-4.89	8.82	1.61	2.74	0.09	.549
6.20	-4.69	8.01	1.51	2.64	0.09	.545
6.40	-4.50	7.28	1.42	2.56	0.10	.541
6.80	-3.97	6.08	1.28	2.37	0.12	.526
7.00	-3.70	5.57	1.22	2.28	0.12	.517
7.20	-3.42	5.09	1.16	2.19	0.14	.508
7.40	-3.08	4.67	1.12	2.08	0.15	.493
7.60	-2.67	4.44	1.12	1.98	0.17	.468
7.80	-2.55	4.16	1.08	1.93	0.17	.463

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ $\tilde{\epsilon}$)	R($\phi=0$)
8.00	-2.24	3.84	1.05	1.83	0.19	.443
8.20	-1.91	3.64	1.05	1.74	0.22	.418
8.40	-1.66	3.49	1.05	1.66	0.23	.397
8.60	-1.38	3.36	1.06	1.58	0.25	.372
8.80	-1.16	3.26	1.07	1.52	0.27	.351
9.00	-0.92	3.18	1.09	1.46	0.29	.327
9.20	-0.74	3.13	1.11	1.41	0.30	.309
9.40	-0.55	3.09	1.14	1.36	0.31	.290
9.60	-0.36	3.06	1.17	1.31	0.32	.273
9.80	-0.19	3.06	1.20	1.27	0.33	.258
10.00	-0.01	3.08	1.24	1.24	0.33	.244
10.20	0.16	3.14	1.29	1.22	0.32	.234
10.40	0.27	3.27	1.33	1.23	0.30	.233
10.60	0.29	3.42	1.36	1.25	0.29	.238
10.80	0.25	3.53	1.38	1.28	0.28	.245
11.00	0.17	3.60	1.37	1.31	0.28	.253
11.20	0.07	3.61	1.36	1.33	0.28	.259
11.40	-0.02	3.57	1.33	1.34	0.28	.264
11.60	-0.09	3.50	1.31	1.34	0.29	.266
11.80	-0.14	3.42	1.28	1.33	0.29	.266
12.00	-0.16	3.32	1.26	1.32	0.30	.264
12.20	-0.14	3.24	1.25	1.30	0.31	.260
12.40	-0.13	3.18	1.23	1.29	0.31	.257
12.60	-0.11	3.11	1.23	1.27	0.32	.254
12.80	-0.10	3.07	1.22	1.26	0.33	.251
13.00	-0.08	3.02	1.21	1.25	0.33	.248
13.20	-0.07	2.96	1.20	1.23	0.34	.245
13.40	-0.04	2.90	1.20	1.21	0.34	.240
13.60	-0.01	2.86	1.19	1.20	0.35	.236
13.80	0.03	2.82	1.19	1.18	0.36	.231
14.00	0.08	2.78	1.20	1.16	0.36	.225
14.20	0.14	2.76	1.21	1.14	0.36	.219
14.40	0.21	2.76	1.22	1.13	0.36	.214
14.60	0.28	2.78	1.24	1.12	0.36	.210
14.80	0.35	2.84	1.27	1.12	0.35	.207
15.00	0.38	2.94	1.29	1.14	0.33	.210
15.20	0.35	3.06	1.31	1.17	0.32	.218
15.40	0.28	3.14	1.31	1.20	0.32	.226
15.60	0.21	3.21	1.31	1.23	0.31	.234
15.80	0.09	3.26	1.29	1.26	0.31	.244
16.00	0.00	3.27	1.28	1.28	0.31	.251
16.20	-0.10	3.29	1.26	1.30	0.30	.259
16.40	-0.25	3.30	1.24	1.33	0.30	.270
16.60	-0.38	3.26	1.21	1.35	0.30	.280
16.80	-0.49	3.20	1.17	1.37	0.31	.288
17.60	-0.87	2.85	1.03	1.39	0.32	.320
17.00	-0.61	3.15	1.14	1.38	0.31	.297
17.20	-0.73	3.07	1.10	1.39	0.31	.307
17.40	-0.82	2.96	1.06	1.39	0.31	.314
17.80	-0.94	2.75	0.99	1.39	0.33	.327
18.00	-1.00	2.64	0.95	1.38	0.33	.334
18.20	-1.04	2.52	0.92	1.37	0.34	.340
18.40	-1.07	2.41	0.88	1.36	0.35	.346
18.60	-1.09	2.29	0.85	1.35	0.36	.351
18.80	-1.10	2.17	0.82	1.33	0.37	.355
19.00	-1.10	2.06	0.79	1.31	0.38	.359
19.20	-1.08	1.96	0.76	1.29	0.39	.360

Energy (eV)	ϵ_1	ϵ_2	n	k	Im(-1/ ϵ)	R($\phi=0$)
19.40	-1.06	1.87	0.74	1.27	0.40	.361
19.60	-1.04	1.79	0.72	1.25	0.42	.363
19.80	-1.02	1.71	0.70	1.23	0.43	.364
20.00	-1.01	1.61	0.67	1.21	0.45	.369
20.20	-0.95	1.54	0.65	1.17	0.47	.365
20.40	-0.92	1.47	0.64	1.15	0.49	.364
20.80	-0.84	1.35	0.61	1.10	0.53	.357
21.20	-0.76	1.26	0.60	1.06	0.58	.349
21.60	-0.70	1.19	0.58	1.02	0.63	.342
22.00	-0.64	1.12	0.57	0.98	0.67	.336
22.40	-0.58	1.06	0.56	0.95	0.72	.328
22.80	-0.55	1.00	0.55	0.92	0.77	.325
23.20	-0.51	0.94	0.53	0.89	0.82	.322
23.60	-0.46	0.88	0.52	0.85	0.89	.317
24.00	-0.42	0.83	0.50	0.82	0.96	.314
24.40	-0.38	0.78	0.49	0.79	1.04	.309
24.80	-0.34	0.72	0.48	0.75	1.14	.303
25.20	-0.29	0.68	0.47	0.72	1.25	.295
25.60	-0.25	0.63	0.47	0.68	1.37	.286
26.00	-0.20	0.60	0.46	0.64	1.51	.276
26.40	-0.16	0.56	0.46	0.61	1.66	.263
26.80	-0.11	0.53	0.46	0.57	1.82	.249
27.20	-0.06	0.50	0.47	0.53	1.96	.231
27.60	-0.03	0.48	0.48	0.50	2.08	.216
28.00	0.02	0.46	0.49	0.47	2.17	.198
29.00	0.10	0.42	0.51	0.41	2.28	.164
30.00	0.18	0.38	0.55	0.34	2.17	.129
31.00	0.26	0.35	0.59	0.29	1.83	.097
32.00	0.34	0.33	0.64	0.26	1.47	.072
32.50	0.36	0.33	0.65	0.25	1.37	.066
33.00	0.39	0.32	0.67	0.24	1.27	.060
34.00	0.44	0.31	0.70	0.22	1.05	.047
35.00	0.50	0.30	0.74	0.20	0.88	.036
36.00	0.56	0.30	0.77	0.19	0.75	.029
37.00	0.61	0.30	0.80	0.19	0.65	.023
38.00	0.67	0.32	0.84	0.19	0.58	.018
39.00	0.73	0.36	0.88	0.21	0.55	.016
40.00	0.70	0.44	0.87	0.25	0.65	.023
41.00	0.69	0.44	0.87	0.25	0.66	.023
42.00	0.70	0.44	0.87	0.25	0.65	.023
43.00	0.71	0.46	0.88	0.26	0.65	.023
44.00	0.70	0.50	0.88	0.28	0.68	.026
45.00	0.66	0.53	0.87	0.31	0.74	.031
46.00	0.62	0.53	0.84	0.31	0.80	.035
47.00	0.59	0.50	0.83	0.31	0.84	.036
48.00	0.58	0.49	0.82	0.30	0.85	.036
49.00	0.56	0.48	0.81	0.30	0.87	.037
50.00	0.55	0.47	0.80	0.30	0.90	.039
51.00	0.53	0.47	0.79	0.30	0.93	.040
52.00	0.50	0.46	0.77	0.30	0.99	.044
53.00	0.47	0.45	0.75	0.30	1.05	.048
54.00	0.43	0.42	0.71	0.29	1.18	.055
55.00	0.39	0.37	0.68	0.27	1.27	.060
56.00	0.38	0.31	0.66	0.23	1.29	.061
57.00	0.38	0.25	0.65	0.20	1.22	.060
58.00	0.39	0.20	0.64	0.16	1.04	.055
59.00	0.41	0.16	0.65	0.12	0.81	.050