

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks
				Film	X-tal	Bulk	Prep		
CHR73	6.2-41.3	m-θ		x			Ex	R, n, k, ε ₁ , ε ₂	table of λ, n, k
WOL Unpl	0.1-40	Ref1	4.2 K for hν < 4.4 eV RT for hν > 4.4 eV				x EP	R; KK: n, k, ε ₁ , ε ₂	absorption measured by calorimetry for hν < 4.4 eV, reflectivity measured for hν > 4.4 eV with synchrotron radiation

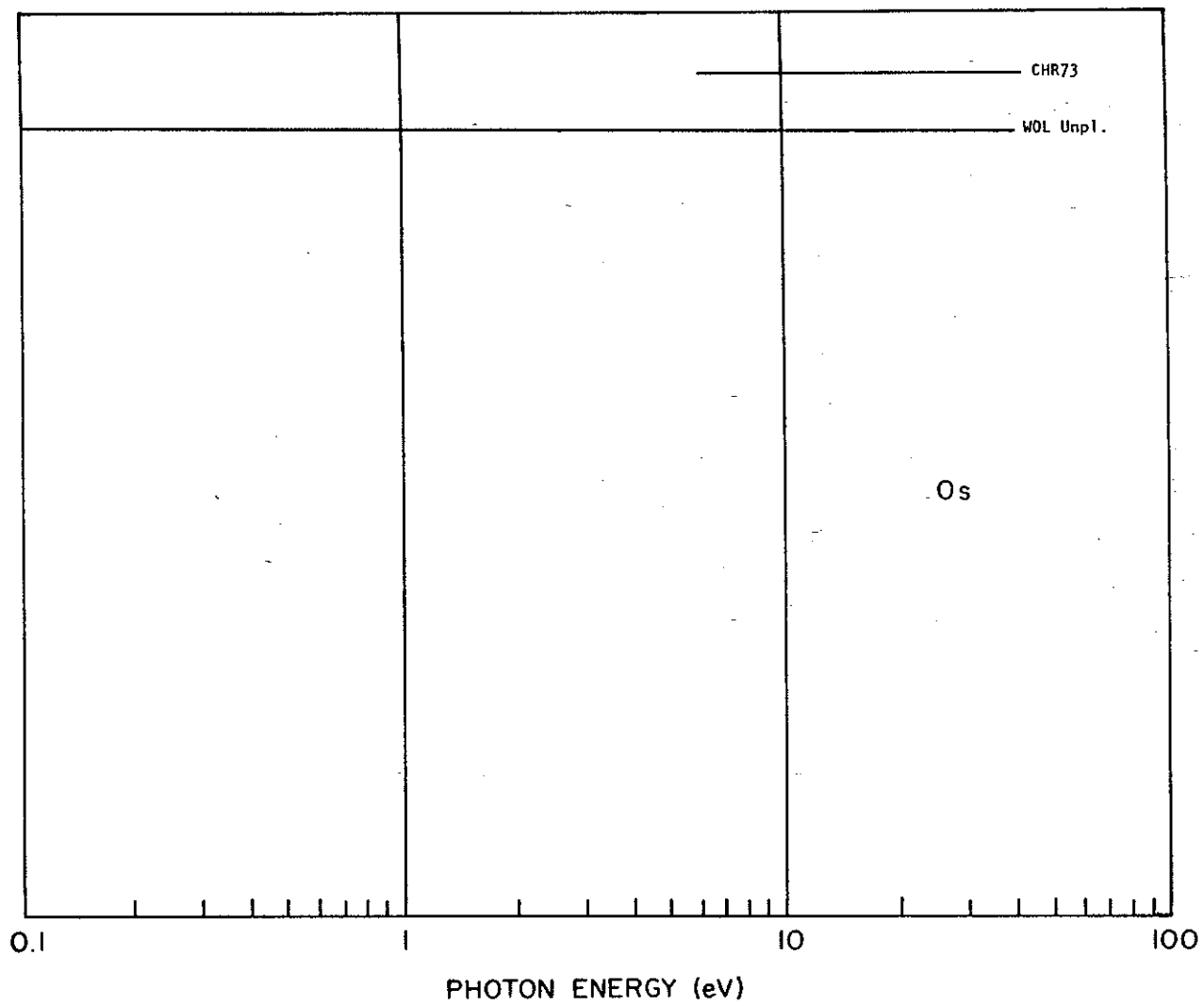


Fig. 89 Survey of available data for Os

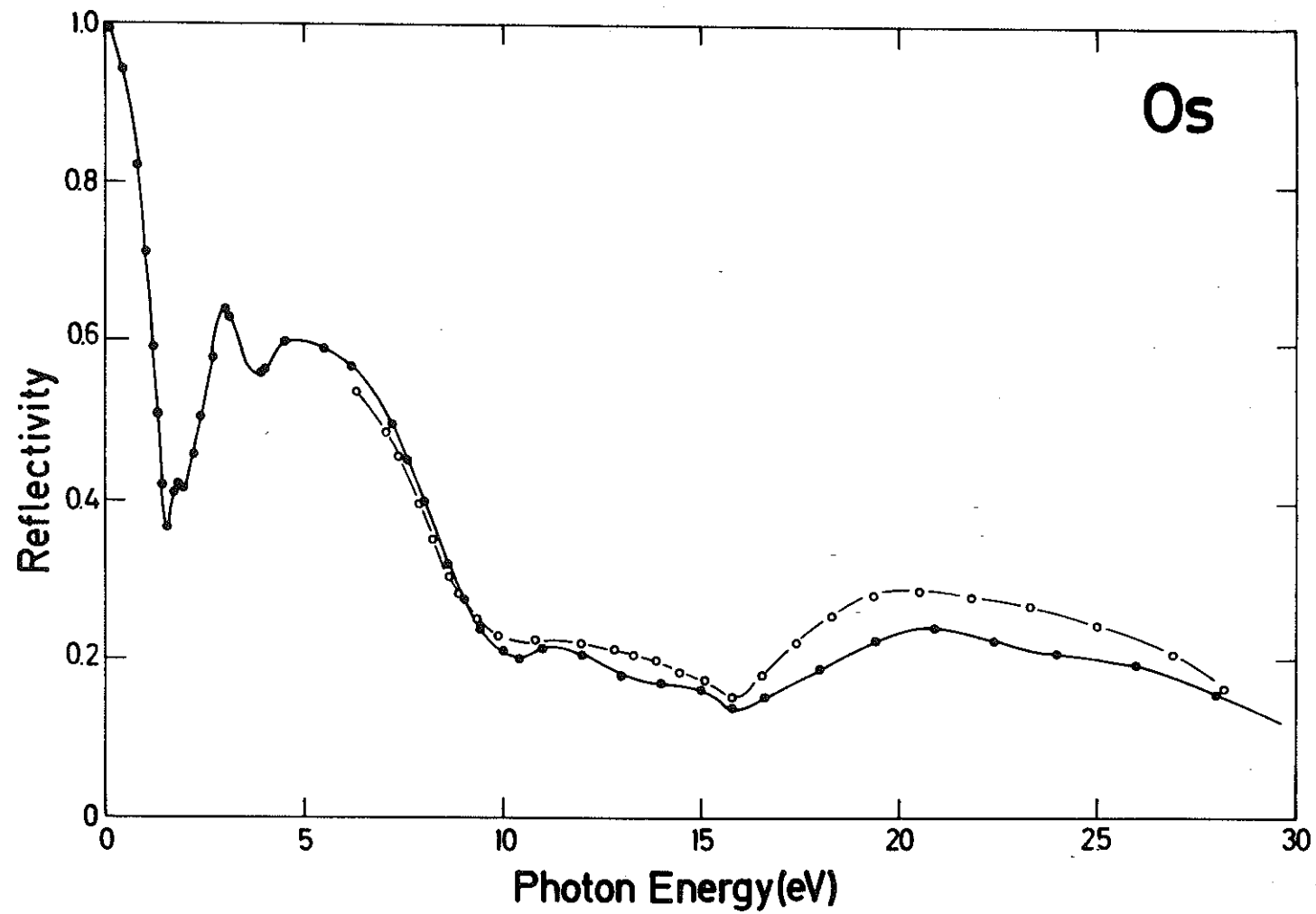


Fig. 90 Reflectivity of polycrystalline Os. ●-●- LOW (unpub); ○-○ CHR73.

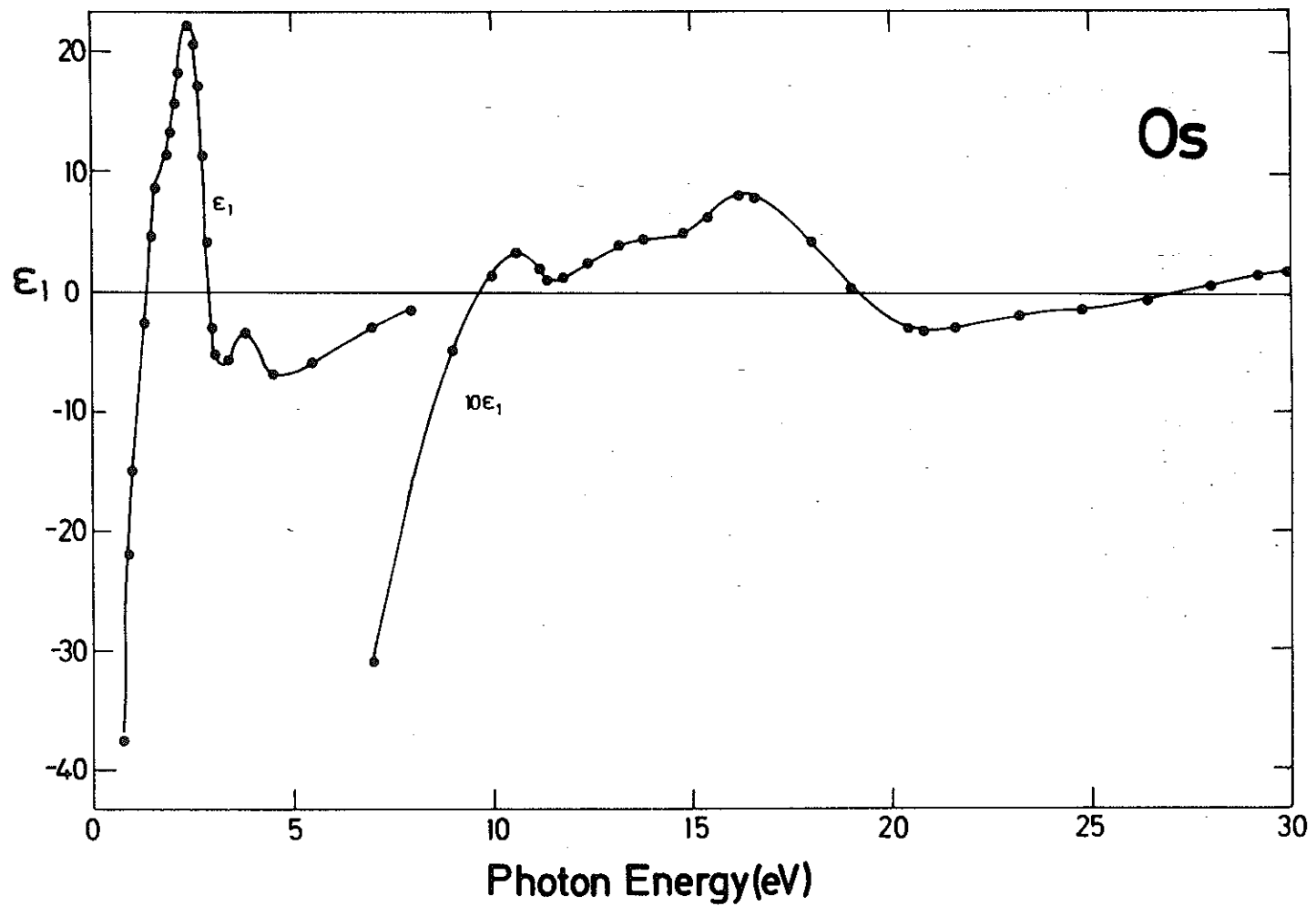


Fig. 91 ϵ_1 for polycrystalline Os reported by LOW (unpub).

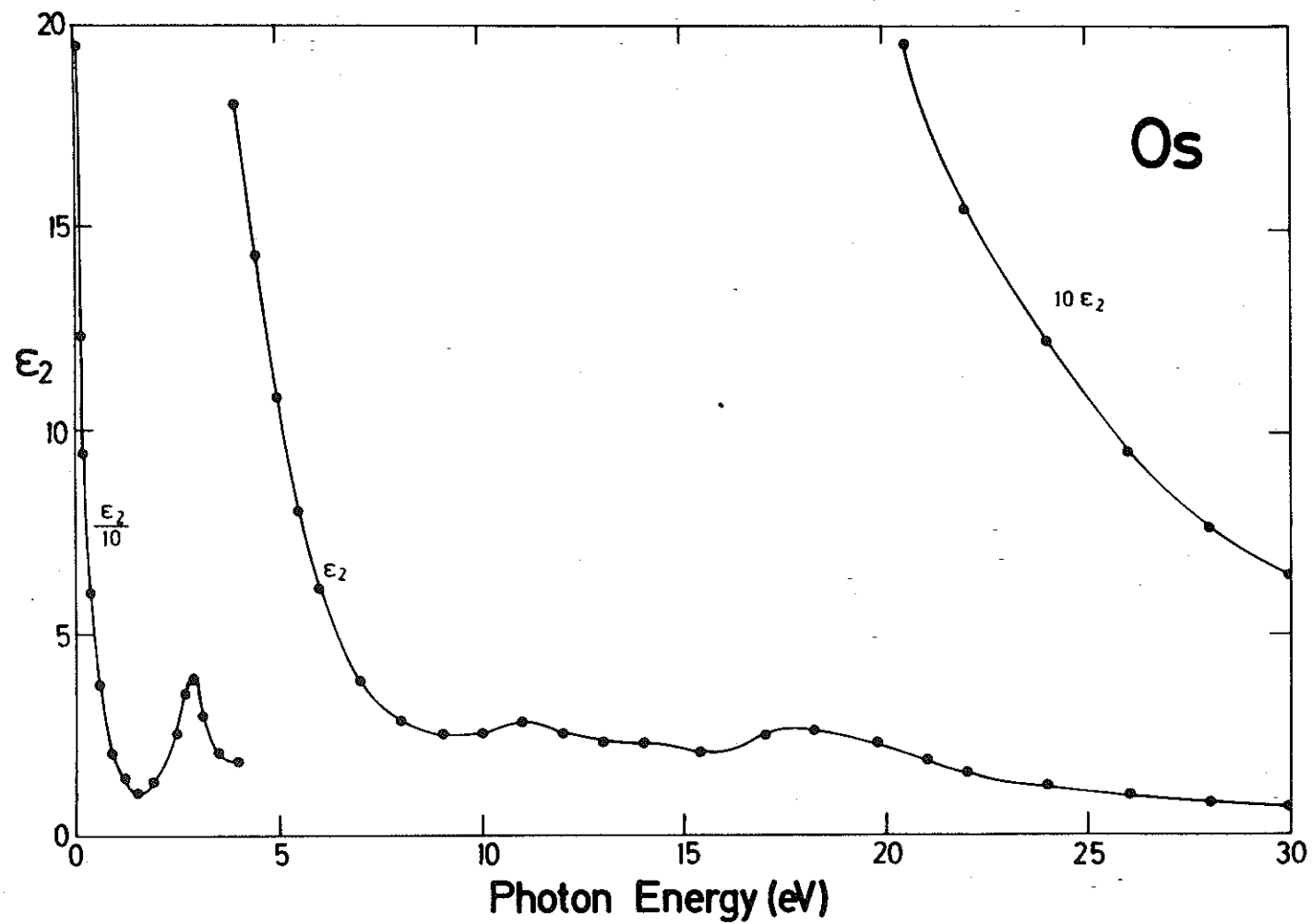


Fig. 92 ϵ_2 for polycrystalline Os reported by LOW (unpub).

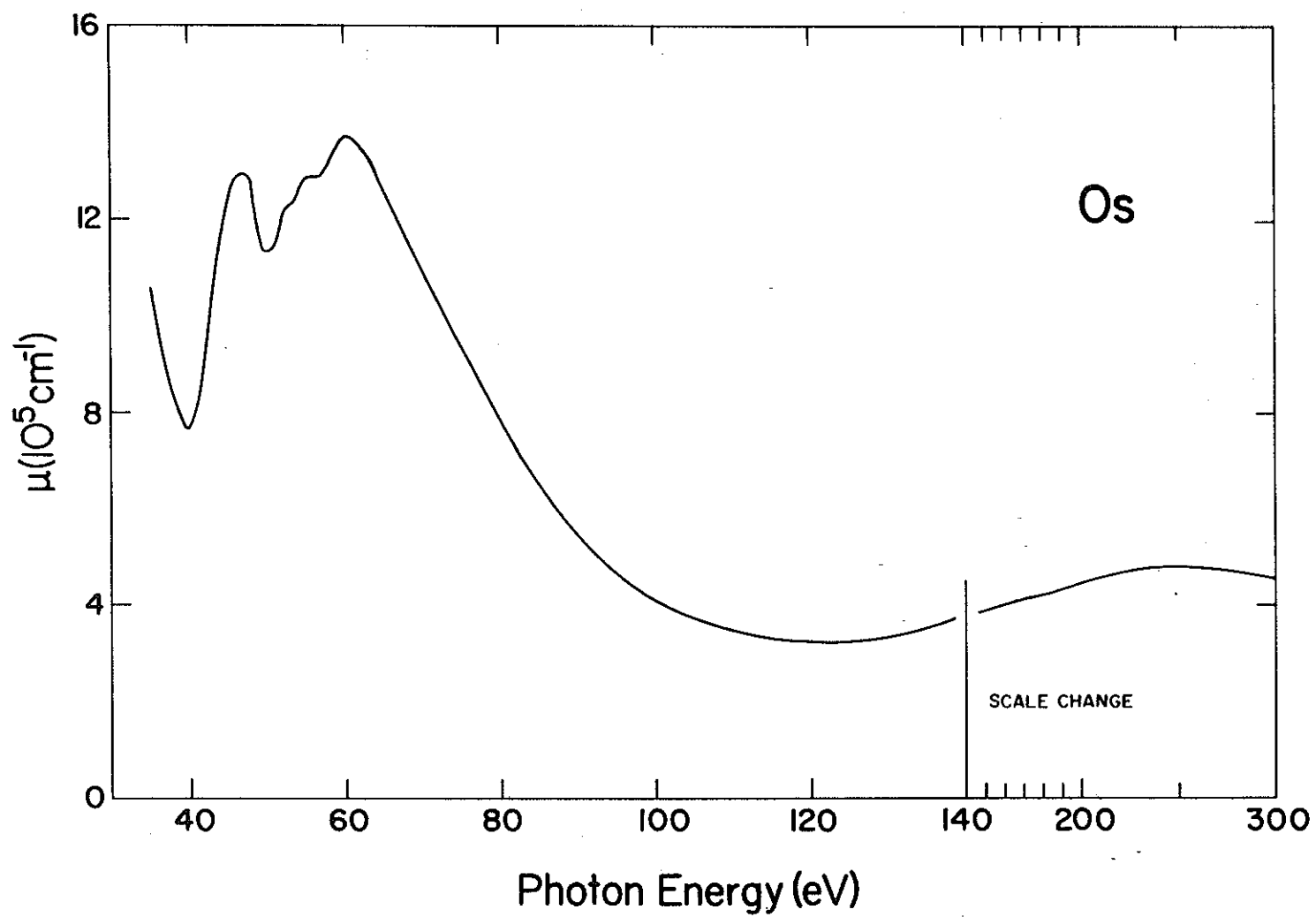


Fig. 93 Absorption coefficient for Os reported by Leyser 1972.

Polycrystalline Osmium

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	-2506.77	409.56	4.08	50.23	0.00	.994
0.15	-1120.81	195.24	2.90	33.60	0.00	.990
0.20	-624.50	122.81	2.44	25.11	0.00	.985
0.25	-394.03	93.75	2.35	19.99	0.00	.977
0.30	-268.65	73.93	2.23	16.54	0.00	.969
0.35	-192.38	65.60	2.33	14.06	0.00	.955
0.40	-145.71	60.31	2.45	12.32	0.00	.940
0.45	-115.54	53.62	2.43	11.02	0.00	.927
0.50	-93.62	47.99	2.41	9.97	0.00	.913
0.55	-77.73	42.47	2.33	9.12	0.01	.901
0.60	-65.21	37.02	2.21	8.37	0.01	.890
0.65	-54.58	32.33	2.11	7.68	0.01	.877
0.70	-45.50	28.50	2.02	7.04	0.01	.862
0.75	-37.69	25.88	2.00	6.46	0.01	.842
0.80	-31.44	23.86	2.00	5.95	0.02	.820
0.85	-26.30	22.11	2.01	5.51	0.02	.796
0.90	-21.89	20.70	2.03	5.10	0.02	.769
0.95	-18.24	19.45	2.05	4.74	0.03	.742
1.00	-15.08	18.38	2.09	4.41	0.03	.712
1.05	-12.41	17.42	2.12	4.11	0.04	.682
1.10	-10.13	16.50	2.15	3.84	0.04	.651
1.15	-8.16	15.58	2.17	3.59	0.05	.621
1.20	-6.53	14.43	2.16	3.35	0.06	.592
1.25	-4.45	13.31	2.19	3.04	0.07	.549
1.30	-2.59	12.43	2.25	2.77	0.08	.506
1.35	-0.61	11.65	2.35	2.48	0.09	.458
1.40	1.23	11.10	2.49	2.23	0.09	.419
1.45	3.00	10.63	2.65	2.01	0.09	.389
1.50	4.84	10.24	2.84	1.80	0.08	.369
1.53	6.08	10.18	2.99	1.70	0.07	.364
1.57	7.62	10.48	3.21	1.63	0.06	.370
1.60	8.67	10.92	3.36	1.62	0.06	.379
1.65	9.96	11.88	3.57	1.66	0.05	.396
1.70	10.66	12.92	3.70	1.75	0.05	.411
1.75	10.89	13.54	3.76	1.80	0.04	.419
1.80	10.96	13.88	3.78	1.83	0.04	.423
1.85	11.07	13.68	3.79	1.81	0.04	.421
1.90	11.50	13.32	3.81	1.75	0.04	.418
1.95	12.24	12.93	3.88	1.67	0.04	.416
2.00	13.29	12.74	3.98	1.60	0.04	.418
2.05	14.48	12.83	4.11	1.56	0.03	.424
2.10	15.75	13.07	4.26	1.54	0.03	.432
2.15	17.15	13.77	4.42	1.56	0.03	.444
2.20	18.31	14.86	4.58	1.62	0.03	.457
2.25	19.21	15.79	4.69	1.68	0.03	.467
2.30	20.29	17.03	4.84	1.76	0.02	.479
2.35	21.26	18.64	4.98	1.87	0.02	.493
2.40	21.99	20.52	5.10	2.01	0.02	.506
2.45	22.38	22.87	5.22	2.19	0.02	.520

Os

-259-

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
2.50	22.25	25.14	5.28	2.38	0.02	.532
2.60	20.82	30.22	5.36	2.82	0.02	.557
2.70	17.25	34.85	5.30	3.29	0.02	.580
2.80	11.44	38.35	5.07	3.78	0.02	.603
2.90	4.11	38.90	4.65	4.14	0.03	.624
2.95	0.48	37.75	4.37	4.32	0.03	.632
3.00	-2.97	35.62	4.05	4.40	0.03	.639
3.05	-4.90	32.41	3.73	4.34	0.03	.638
3.10	-5.38	29.52	3.51	4.21	0.03	.631
3.15	-5.26	27.42	3.37	4.07	0.04	.622
3.20	-4.85	26.04	3.29	3.96	0.04	.614
3.25	-4.89	25.24	3.23	3.91	0.04	.611
3.30	-5.17	24.42	3.15	3.84	0.04	.610
3.35	-5.61	23.43	3.04	3.85	0.04	.610
3.40	-5.79	22.18	2.93	3.79	0.04	.607
3.45	-5.58	20.96	2.84	3.69	0.04	.600
3.50	-5.11	20.09	2.79	3.59	0.05	.591
3.60	-4.35	19.02	2.75	3.45	0.05	.577
3.70	-3.88	18.43	2.73	3.37	0.05	.568
3.80	-3.55	18.10	2.73	3.32	0.05	.562
3.90	-3.51	18.03	2.73	3.31	0.05	.561
4.00	-3.80	18.07	2.71	3.34	0.05	.565
4.10	-4.62	17.96	2.64	3.40	0.05	.575
4.20	-5.46	17.43	2.53	3.44	0.05	.584
4.30	-6.35	16.57	2.39	3.47	0.05	.594
4.40	-6.84	15.41	2.24	3.44	0.05	.599
4.50	-6.99	14.28	2.11	3.38	0.06	.600
4.60	-6.91	13.31	2.01	3.31	0.06	.598
4.70	-6.72	12.56	1.94	3.24	0.06	.594
4.80	-6.62	11.98	1.88	3.19	0.06	.592
4.90	-6.64	11.44	1.82	3.15	0.07	.593
5.00	-6.71	10.82	1.74	3.12	0.07	.596
5.10	-6.70	10.12	1.65	3.07	0.07	.599
5.20	-6.51	9.48	1.58	3.00	0.07	.597
5.30	-6.34	8.93	1.52	2.94	0.07	.595
5.40	-6.17	8.44	1.46	2.88	0.08	.593
5.50	-5.99	7.97	1.41	2.83	0.08	.591
5.60	-5.81	7.52	1.36	2.77	0.08	.589
5.70	-5.59	7.12	1.32	2.71	0.09	.585
5.80	-5.40	6.76	1.27	2.65	0.09	.582
5.90	-5.20	6.43	1.24	2.60	0.09	.578
6.00	-5.03	6.12	1.20	2.54	0.10	.575
6.20	-4.70	5.49	1.13	2.44	0.11	.571
6.40	-4.30	4.93	1.06	2.33	0.12	.562
6.60	-3.88	4.47	1.01	2.21	0.13	.548
6.80	-3.48	4.10	0.97	2.11	0.14	.532
7.00	-3.11	3.80	0.95	2.00	0.16	.514
7.20	-2.79	3.52	0.92	1.91	0.17	.497
7.40	-2.46	3.28	0.91	1.81	0.19	.476
7.60	-2.14	3.09	0.90	1.72	0.22	.451
7.80	-1.85	2.94	0.90	1.63	0.24	.426
8.00	-1.59	2.82	0.91	1.55	0.27	.400
8.20	-1.35	2.70	0.91	1.48	0.30	.375
8.40	-1.08	2.62	0.94	1.40	0.33	.344
8.60	-0.88	2.57	0.96	1.34	0.35	.319
8.80	-0.69	2.53	0.98	1.29	0.37	.296
9.00	-0.50	2.50	1.01	1.24	0.38	.274

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
9.20	-0.34	2.48	1.04	1.19	0.40	.255
9.40	-0.18	2.49	1.08	1.16	0.40	.238
9.60	-0.08	2.52	1.10	1.14	0.40	.229
9.80	0.04	2.52	1.13	1.11	0.40	.217
10.00	0.14	2.54	1.16	1.10	0.39	.209
10.20	0.23	2.57	1.19	1.08	0.39	.203
10.30	0.28	2.60	1.20	1.08	0.38	.201
10.40	0.32	2.63	1.22	1.08	0.37	.200
10.50	0.34	2.68	1.23	1.09	0.37	.201
10.60	0.34	2.72	1.24	1.10	0.36	.203
10.80	0.32	2.78	1.25	1.11	0.36	.206
11.00	0.26	2.81	1.24	1.13	0.35	.213
11.20	0.20	2.81	1.23	1.14	0.35	.217
11.40	0.09	2.75	1.19	1.15	0.36	.223
11.60	0.10	2.62	1.17	1.12	0.38	.216
11.80	0.12	2.55	1.16	1.10	0.39	.211
12.00	0.15	2.48	1.15	1.08	0.40	.205
12.20	0.19	2.41	1.14	1.06	0.41	.199
12.40	0.25	2.36	1.14	1.03	0.42	.191
12.60	0.29	2.34	1.15	1.02	0.41	.186
12.80	0.32	2.32	1.15	1.01	0.41	.183
13.00	0.36	2.29	1.16	0.99	0.43	.178
13.20	0.40	2.28	1.16	0.98	0.43	.174
13.40	0.42	2.27	1.17	0.97	0.43	.172
13.60	0.44	2.27	1.17	0.97	0.42	.170
13.80	0.46	2.26	1.18	0.96	0.42	.169
14.00	0.45	2.26	1.17	0.96	0.43	.169
14.20	0.44	2.23	1.17	0.96	0.43	.168
14.40	0.45	2.19	1.16	0.94	0.44	.165
14.60	0.47	2.15	1.15	0.93	0.44	.161
14.80	0.50	2.11	1.16	0.91	0.45	.156
15.00	0.55	2.09	1.16	0.90	0.45	.151
15.20	0.59	2.08	1.17	0.89	0.45	.148
15.40	0.63	2.07	1.18	0.87	0.44	.144
15.60	0.70	2.07	1.20	0.86	0.43	.140
15.80	0.76	2.09	1.22	0.86	0.42	.138
16.00	0.80	2.15	1.25	0.87	0.41	.140
16.20	0.83	2.22	1.26	0.88	0.40	.142
16.40	0.82	2.29	1.28	0.90	0.39	.147
16.60	0.80	2.35	1.28	0.92	0.38	.152
16.80	0.77	2.40	1.28	0.94	0.38	.157
17.00	0.72	2.45	1.28	0.96	0.38	.162
17.20	0.68	2.48	1.27	0.97	0.37	.167
17.40	0.63	2.52	1.27	0.99	0.37	.172
17.60	0.56	2.55	1.26	1.01	0.37	.178
17.80	0.49	2.56	1.24	1.03	0.38	.184
18.00	0.42	2.57	1.23	1.04	0.38	.189
18.20	0.35	2.57	1.21	1.06	0.38	.194
18.40	0.27	2.56	1.19	1.08	0.39	.200
18.60	0.19	2.54	1.17	1.09	0.39	.205
18.80	0.11	2.51	1.14	1.10	0.40	.210
19.00	0.05	2.46	1.12	1.10	0.41	.214
19.20	-0.02	2.42	1.10	1.10	0.41	.219
19.40	-0.08	2.37	1.07	1.11	0.42	.223
19.60	-0.13	2.32	1.05	1.11	0.43	.227
19.80	-0.19	2.26	1.02	1.11	0.44	.231
20.20	-0.28	2.11	0.96	1.10	0.47	.239

Os

-261-

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
20.40	-0.31	2.03	0.93	1.04	0.48	.240
20.60	-0.32	1.95	0.91	1.07	0.50	.241
20.80	-0.32	1.88	0.89	1.05	0.52	.240
21.00	-0.31	1.81	0.87	1.14	0.54	.238
21.20	-0.31	1.75	0.86	1.12	0.55	.237
21.60	-0.30	1.64	0.83	0.99	0.59	.235
22.00	-0.28	1.55	0.80	0.96	0.63	.230
22.40	-0.25	1.46	0.78	0.93	0.66	.226
22.80	-0.22	1.39	0.77	0.90	0.70	.220
23.20	-0.21	1.33	0.75	0.88	0.74	.217
23.60	-0.18	1.27	0.75	0.86	0.77	.211
24.00	-0.17	1.22	0.73	0.84	0.80	.209
24.40	-0.15	1.17	0.72	0.82	0.84	.207
24.80	-0.14	1.11	0.70	0.80	0.88	.205
25.20	-0.12	1.06	0.69	0.77	0.93	.202
25.60	-0.11	1.00	0.67	0.75	0.99	.199
26.00	-0.09	0.95	0.66	0.72	1.05	.195
26.40	-0.06	0.89	0.65	0.69	1.11	.189
26.80	-0.03	0.84	0.63	0.66	1.19	.183
27.20	0.03	0.81	0.65	0.62	1.24	.165
28.00	0.06	0.76	0.64	0.59	1.30	.156
28.40	0.09	0.73	0.64	0.57	1.35	.148
28.80	0.12	0.71	0.65	0.55	1.37	.140
29.20	0.14	0.69	0.65	0.53	1.40	.134
29.60	0.16	0.66	0.65	0.51	1.42	.128
30.00	0.19	0.64	0.65	0.49	1.43	.121
31.00	0.22	0.59	0.65	0.45	1.48	.111
32.00	0.27	0.54	0.66	0.41	1.47	.095
33.00	0.33	0.50	0.68	0.37	1.39	.079
34.00	0.38	0.47	0.70	0.34	1.29	.068
35.00	0.42	0.45	0.72	0.31	1.18	.057
36.00	0.47	0.43	0.74	0.29	1.06	.048
37.00	0.51	0.42	0.77	0.27	0.96	.040
38.00	0.55	0.42	0.79	0.26	0.87	.035
39.00	0.59	0.41	0.81	0.26	0.80	.031
40.00	0.64	0.43	0.84	0.26	0.72	.026