

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks Rh
				Film	X-tal	Bulk	Prep		
HT59	5.64-20	Ref1					Ex	R	
MC61	6.2-24.8	Trans, Ref1		x			In	R	
LP62	1.88-2.82	Ellips				x	MP	n,k	table λ, n, k at 4 energies of Rh-Pt allo
DH64	0.06-5.64	Ref1		x			Ex	R	
BC67	0.11-3.1	Ellips				x	MP	n,k	
VAK67	3-14.4					x		R	polarimetry $3 < h\nu < 5$ eV, reflectance $4 < h\nu < 7$ eV, photoemission $7.5 < h\nu < 14.4$ eV
KNB68	5-12	Ellips				x		R; KK: $\sigma, \text{Im}(\epsilon^{-1}), \text{Im}(\epsilon+1)^{-1}$	data taken from VAK67, then KK analyzed
SR70	1-50	m- θ		x			Ex	R; $\epsilon_1, \epsilon_2, \text{Im}(\epsilon^{-1})$	optical constants determined by both KK analysis and two angles of incidence technique
CHH71	6.2-82.6	m- θ		x			Ex	R, n, k, ϵ_1, ϵ_2	plotted data are for substrate T = 573° evap. at $\leq 10^{-6}$ Torr
Hu71	6.2-53	Ref1		x			Ex	R	
CoH73	0.56-6.2			x				R, n, k	three techniques used: reflectance + transmittance, ellipsomet and multi-angle. Plotted data are for substrate T = 573°K
PS73	0.5-11.7	Ref1		x			In	R; KK: $\epsilon_1, \epsilon_2, \sigma, \text{Im}(\epsilon^{-1}), \text{Im}(\epsilon+1)^{-1}$	uhv film preparation in situ

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				Film	X-tal	Bulk	Prep		
We75								discussion paper	
W076	20-250	Trans		x			Ex	μ optical absorption measurements with synchrotron radiation	
W0L77	0.2-50	Ref1	4.2 for $h\nu < 4.4$ eV 300 for $h\nu > 4.4$ eV			x	EP	R; KK: $\epsilon_1, \epsilon_2, \sigma, \text{Im}(\epsilon^{-1}), \text{Im}(\epsilon+1)^{-1}$ absorption measured by calorimetry at $h\nu < 4.4$ eV, reflectivity measured at $h\nu > 4.4$ eV with synchrotron radiation; aqua regia + vacuum annealing	
Da Unpl	~5-34							energy loss spectroscopy	

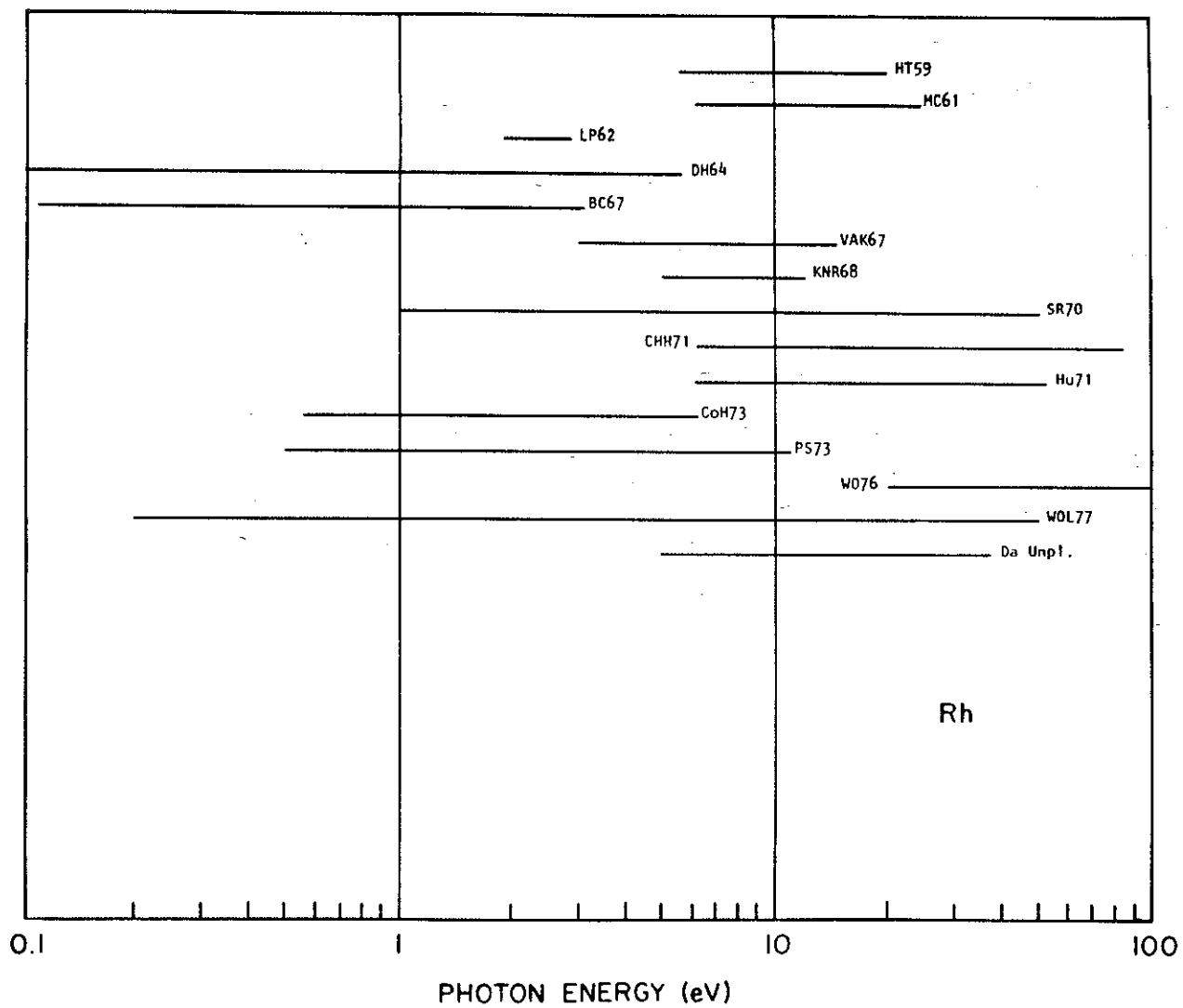


Fig. 57 Survey of available data for Rh

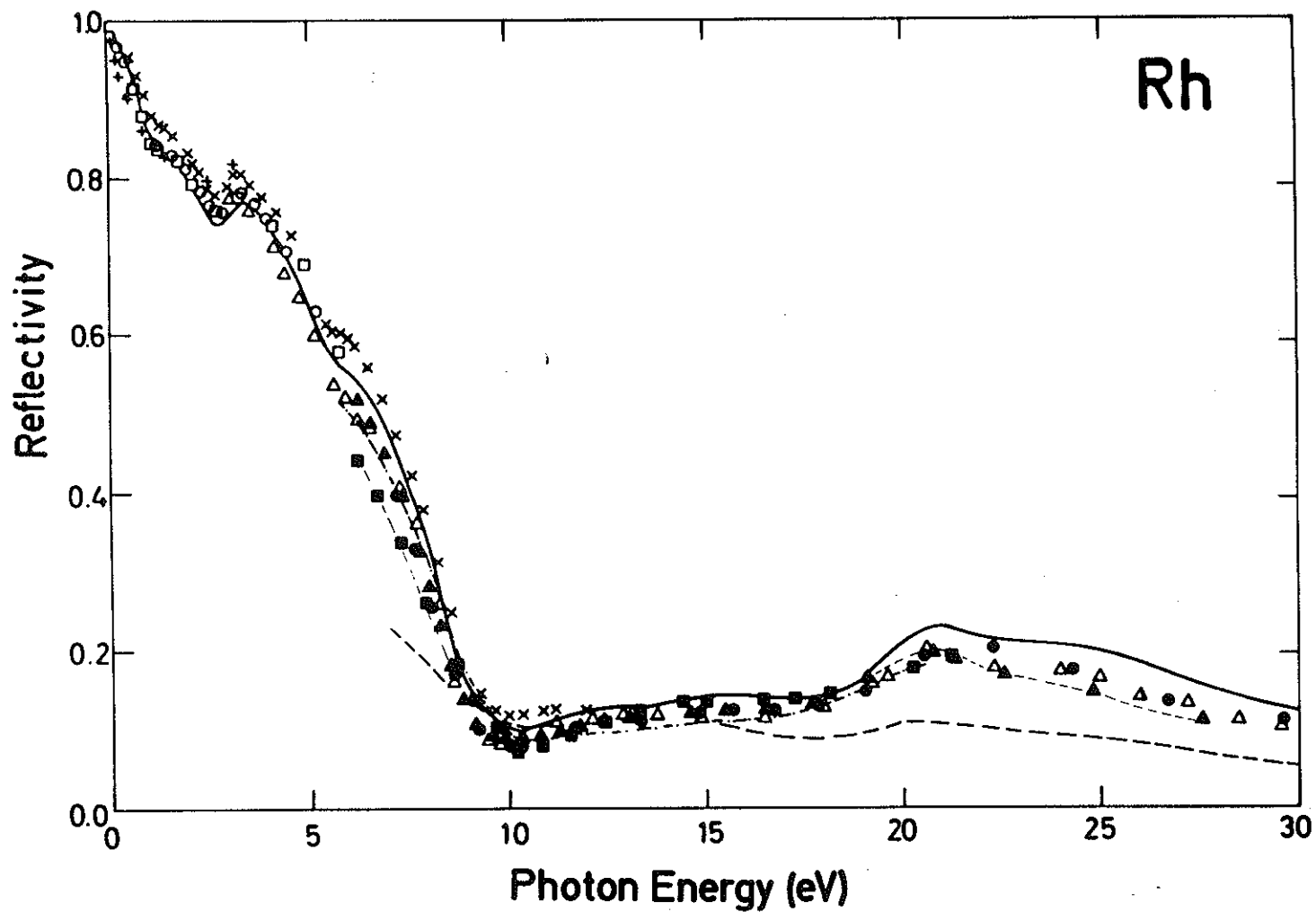


Fig. 58 Reflectivity for Rh. — WOL77; --- MC61; □□□ CHR73; ●●● Hu71;
 ■■■ HT59; ΔΔΔ SR70; ○○○ DH64; ▲▲▲ CHH71; +++ BC67; --- Da (unpub);
 xxx PS73.

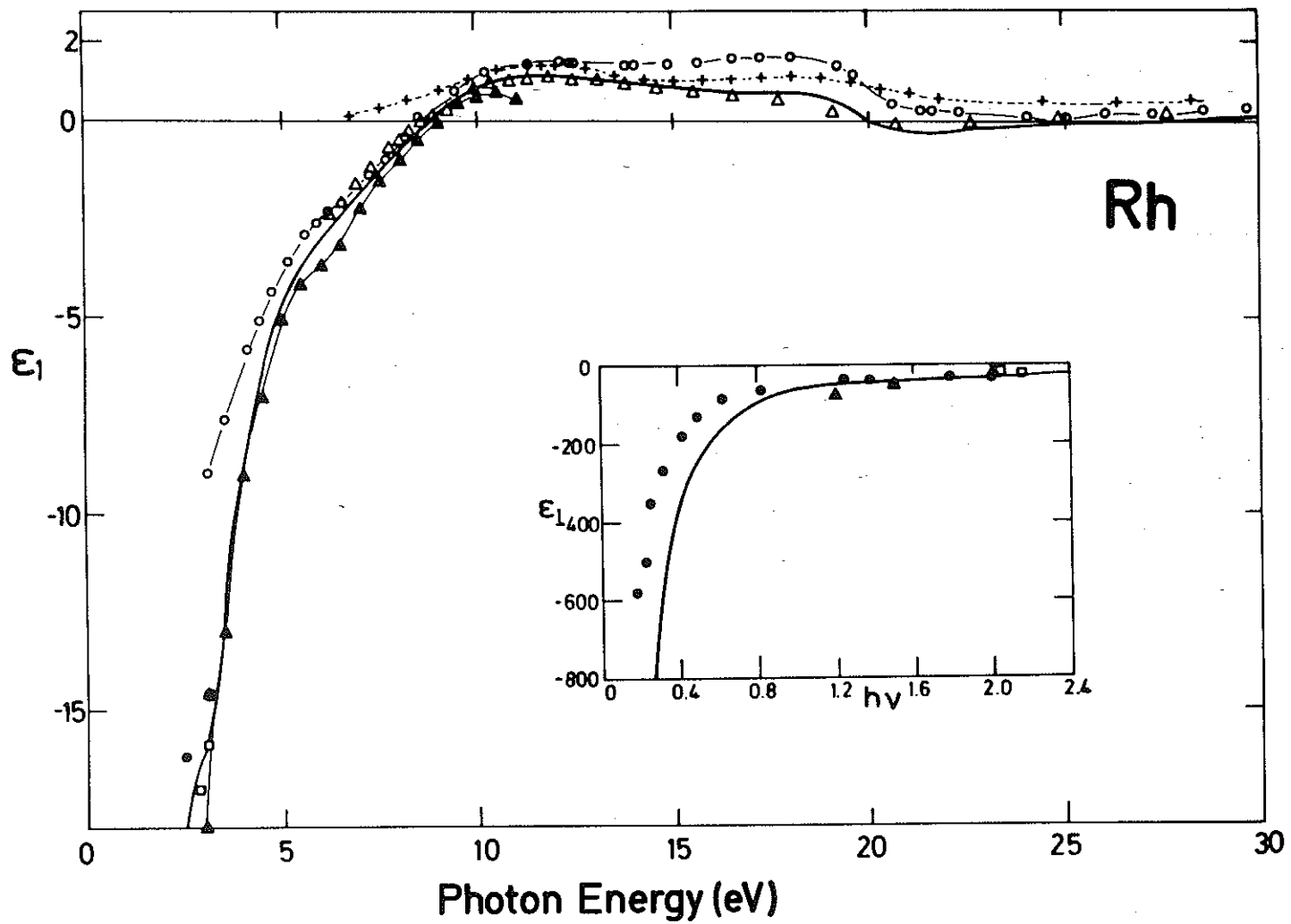


Fig. 59 ϵ_1 for Rh. — WOL77; ooo SR60; $\Delta\Delta\Delta$ CHH71; +++ Da (unpub); $\blacktriangle\blacktriangle\blacktriangle$ PS73; $\bullet\bullet\bullet$ BC67; $\square\square\square$ CHR73.

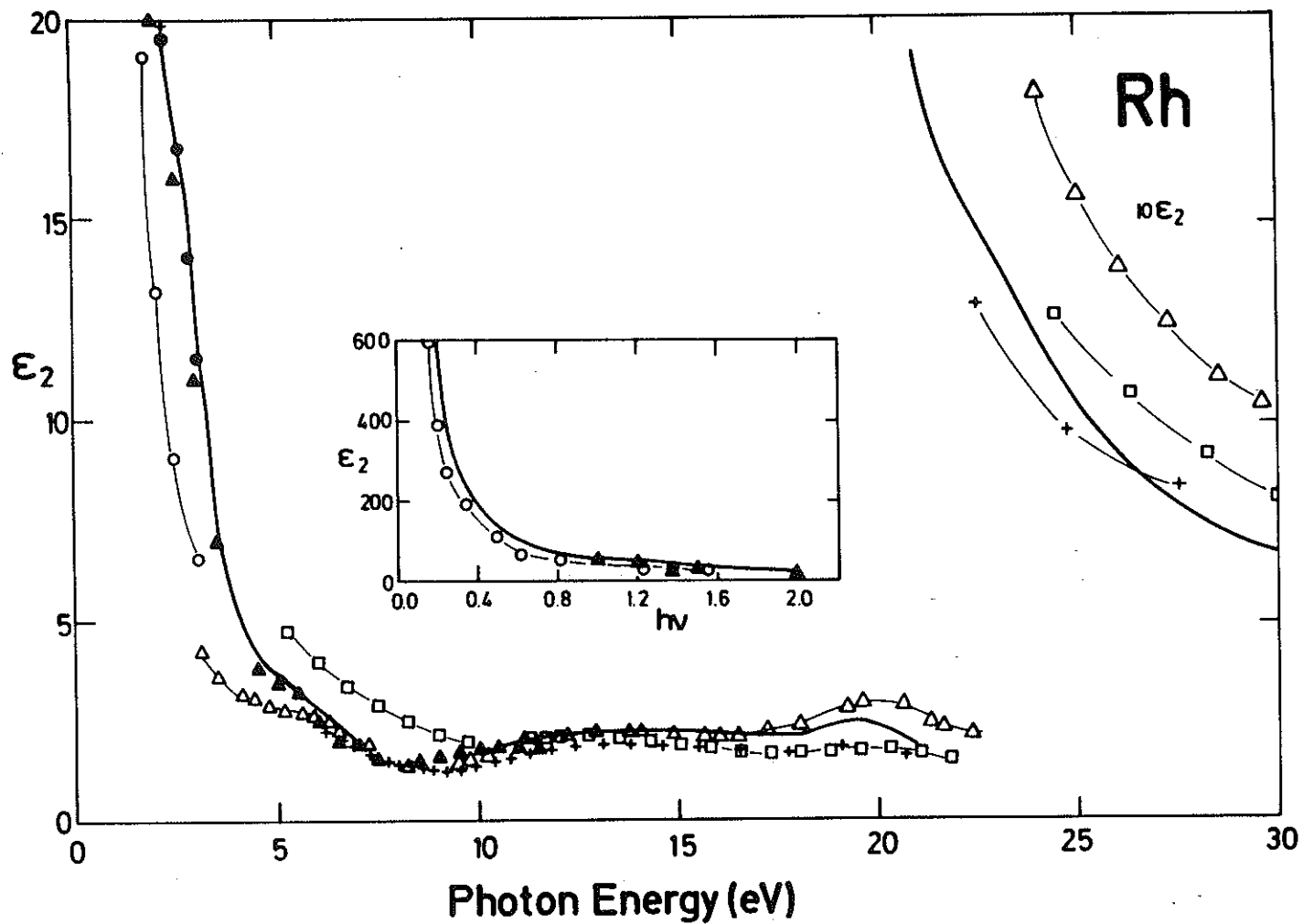


Fig. 60 ϵ_2 for Rh. — WOL77; $\Delta\Delta\Delta$ SR70; +++ CHH71; $\square\square\square$ Da (unpub); $\blacktriangle\blacktriangle\blacktriangle$ PS73; $\circ\circ\circ$ BC67; $\bullet\bullet\bullet$ CHR73.

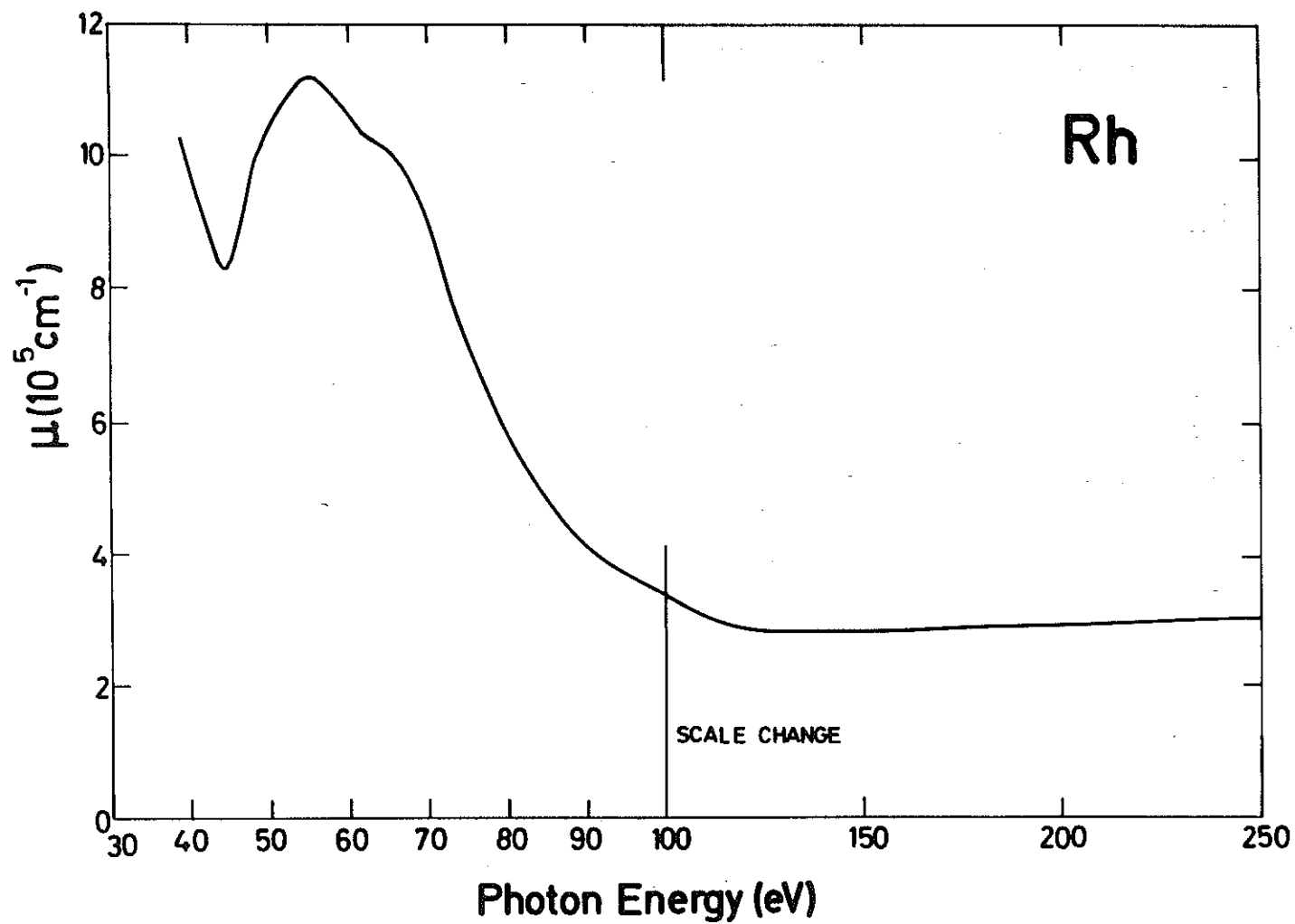


Fig. 61. Absorption coefficient for Rh reported by W076.

Rhodium

publication by J.H. Weaver, C.G. Olson, and D.W. Lynch in Phys. Rev. B,
4115 (1977) based on the following tabulation

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-4478.50	2565.33	18.48	69.43	0.00	.986
0.15	-2228.19	1117.16	11.50	48.58	0.00	.982
0.20	-1327.94	648.56	8.66	37.46	0.00	.977
0.25	-891.09	429.88	7.01	30.66	0.00	.972
0.30	-638.87	303.34	5.85	25.94	0.00	.967
0.35	-475.63	234.24	5.22	22.43	0.00	.961
0.40	-369.43	187.84	4.74	19.80	0.00	.955
0.45	-294.14	157.51	4.45	17.72	0.00	.948
0.50	-240.71	134.97	4.20	16.07	0.00	.941
0.55	-200.17	116.57	3.97	14.69	0.00	.934
0.60	-167.48	104.53	3.87	13.51	0.00	.925
0.65	-143.33	94.73	3.77	12.55	0.00	.916
0.70	-123.86	86.11	3.67	11.72	0.00	.908
0.75	-107.19	79.71	3.63	10.97	0.00	.898
0.80	-93.74	74.98	3.63	10.34	0.01	.887
0.85	-82.95	71.44	3.64	9.81	0.01	.876
0.90	-74.53	67.70	3.62	9.36	0.01	.867
0.95	-66.24	65.99	3.69	8.94	0.01	.855
1.00	-61.37	64.40	3.71	8.67	0.01	.848
1.05	-57.36	62.70	3.72	8.44	0.01	.841
1.10	-54.72	60.67	3.67	8.26	0.01	.837
1.15	-52.53	58.29	3.60	8.09	0.01	.834
1.20	-50.78	55.70	3.51	7.94	0.01	.832
1.25	-49.31	52.74	3.38	7.80	0.01	.831
1.30	-47.60	49.75	3.26	7.63	0.01	.829
1.40	-44.34	43.96	3.01	7.31	0.01	.827
1.50	-40.85	38.69	2.78	6.97	0.01	.823
1.60	-37.29	34.45	2.60	6.64	0.01	.818
1.70	-34.24	30.63	2.42	6.33	0.01	.813
1.80	-31.01	27.69	2.30	6.02	0.02	.805
1.90	-28.34	25.29	2.20	5.76	0.02	.798
2.00	-25.92	23.34	2.12	5.51	0.02	.789
2.10	-23.86	21.75	2.05	5.30	0.02	.780
2.20	-22.12	20.41	2.00	5.11	0.02	.772
2.30	-20.64	19.14	1.94	4.94	0.02	.765
2.40	-19.18	18.18	1.90	4.78	0.03	.756
2.50	-18.05	17.48	1.88	4.65	0.03	.748
2.60	-17.29	16.88	1.85	4.55	0.03	.743
2.70	-16.87	16.18	1.80	4.49	0.03	.742
2.90	-16.36	14.26	1.63	4.36	0.03	.748
3.00	-16.05	13.10	1.53	4.29	0.03	.753
3.10	-15.65	11.84	1.41	4.20	0.03	.760
3.20	-15.02	10.64	1.30	4.09	0.03	.764
3.30	-14.31	9.55	1.20	3.97	0.03	.767
3.40	-13.53	8.55	1.11	3.84	0.03	.769
3.50	-12.67	7.71	1.04	3.71	0.04	.768
3.60	-11.80	7.06	0.99	3.58	0.04	.764
3.70	-11.02	6.54	0.95	3.45	0.04	.759
3.80	-10.30	6.10	0.91	3.34	0.04	.753

Rh

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Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
3.90	-9.64	5.70	0.88	3.23	0.05	.747
4.00	-9.00	5.39	0.86	3.12	0.05	.739
4.10	-8.44	5.11	0.84	3.03	0.05	.731
4.20	-7.93	4.89	0.83	2.94	0.06	.722
4.30	-7.49	4.58	0.80	2.85	0.06	.718
4.40	-6.97	4.39	0.80	2.76	0.06	.706
4.50	-6.54	4.21	0.79	2.68	0.07	.696
4.60	-6.12	4.06	0.78	2.60	0.08	.684
4.70	-5.74	3.97	0.79	2.52	0.08	.670
4.80	-5.41	3.86	0.79	2.46	0.09	.659
4.90	-5.09	3.79	0.79	2.39	0.09	.645
5.00	-4.84	3.69	0.79	2.34	0.10	.635
5.20	-4.34	3.54	0.79	2.23	0.11	.613
5.40	-3.93	3.41	0.80	2.14	0.13	.591
5.60	-3.61	3.30	0.80	2.06	0.14	.573
5.80	-3.37	3.15	0.79	2.00	0.15	.561
6.00	-3.16	2.92	0.76	1.93	0.16	.556
6.20	-2.89	2.71	0.73	1.85	0.17	.544
6.40	-2.65	2.50	0.70	1.77	0.19	.534
6.60	-2.38	2.31	0.68	1.69	0.21	.518
6.80	-2.11	2.15	0.67	1.60	0.24	.498
7.00	-1.86	2.02	0.66	1.52	0.27	.476
7.20	-1.62	1.89	0.66	1.43	0.30	.452
7.40	-1.39	1.79	0.66	1.35	0.35	.423
7.60	-1.18	1.70	0.67	1.27	0.40	.394
7.80	-0.98	1.62	0.68	1.20	0.45	.363
8.00	-0.78	1.53	0.69	1.12	0.52	.329
8.20	-0.56	1.48	0.71	1.04	0.59	.288
8.40	-0.38	1.43	0.74	0.97	0.65	.252
8.60	-0.18	1.40	0.78	0.89	0.70	.212
8.80	0.00	1.38	0.83	0.83	0.73	.179
9.00	0.18	1.37	0.88	0.77	0.72	.148
9.20	0.36	1.39	0.95	0.73	0.68	.125
9.40	0.52	1.42	1.01	0.71	0.62	.110
9.60	0.65	1.48	1.07	0.69	0.57	.102
9.80	0.78	1.53	1.12	0.69	0.52	.098
10.00	0.88	1.62	1.17	0.69	0.48	.098
10.20	0.96	1.69	1.21	0.70	0.45	.100
10.40	1.01	1.77	1.24	0.72	0.42	.104
10.60	1.06	1.84	1.26	0.73	0.41	.106
10.80	1.08	1.91	1.28	0.75	0.40	.110
11.00	1.10	1.96	1.29	0.76	0.39	.113
11.20	1.12	2.01	1.31	0.77	0.38	.116
11.40	1.12	2.07	1.32	0.79	0.37	.120
11.60	1.10	2.12	1.32	0.80	0.37	.124
11.80	1.08	2.14	1.32	0.81	0.37	.126
12.00	1.07	2.15	1.32	0.82	0.37	.127
12.20	1.06	2.16	1.32	0.82	0.37	.128
12.40	1.05	2.17	1.32	0.82	0.37	.129
12.60	1.05	2.17	1.32	0.82	0.37	.129
12.80	1.05	2.18	1.32	0.83	0.37	.130
13.00	1.04	2.19	1.32	0.83	0.37	.131
13.20	1.04	2.21	1.32	0.84	0.37	.132
13.40	1.03	2.22	1.32	0.84	0.37	.133
13.60	1.03	2.23	1.32	0.85	0.37	.134
13.80	1.02	2.26	1.32	0.85	0.37	.136
14.00	1.00	2.27	1.32	0.86	0.37	.138

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
14.20	0.97	2.29	1.32	0.87	0.37	.140
14.40	0.94	2.30	1.31	0.88	0.37	.142
14.60	0.91	2.31	1.30	0.89	0.37	.144
14.80	0.87	2.31	1.29	0.89	0.38	.146
15.00	0.83	2.30	1.28	0.90	0.38	.147
15.20	0.80	2.29	1.27	0.90	0.39	.148
15.40	0.78	2.25	1.26	0.90	0.40	.147
15.60	0.76	2.24	1.25	0.90	0.40	.147
15.80	0.75	2.21	1.24	0.89	0.41	.147
16.00	0.73	2.20	1.24	0.89	0.41	.147
16.25	0.72	2.18	1.23	0.89	0.41	.146
16.50	0.72	2.16	1.23	0.88	0.42	.145
16.75	0.71	2.15	1.22	0.88	0.42	.145
17.00	0.71	2.14	1.22	0.88	0.42	.144
17.25	0.71	2.14	1.22	0.88	0.42	.144
17.50	0.72	2.13	1.22	0.87	0.42	.143
17.75	0.73	2.15	1.23	0.88	0.42	.144
18.00	0.74	2.18	1.23	0.88	0.41	.145
18.25	0.73	2.23	1.24	0.90	0.40	.149
18.50	0.70	2.30	1.25	0.92	0.40	.155
18.75	0.65	2.36	1.25	0.95	0.39	.162
19.00	0.56	2.43	1.24	0.98	0.39	.172
19.25	0.43	2.47	1.21	1.02	0.39	.183
19.50	0.29	2.47	1.18	1.05	0.40	.193
19.75	0.17	2.44	1.14	1.07	0.41	.202
20.00	0.03	2.38	1.10	1.09	0.42	.213
20.25	-0.09	2.30	1.05	1.09	0.43	.221
20.50	-0.19	2.18	1.00	1.09	0.45	.230
20.75	-0.25	2.05	0.95	1.08	0.48	.233
21.00	-0.27	1.92	0.91	1.05	0.51	.234
21.25	-0.28	1.81	0.88	1.03	0.54	.232
21.50	-0.25	1.72	0.86	1.00	0.57	.228
21.75	-0.24	1.64	0.84	0.97	0.60	.224
22.00	-0.21	1.58	0.83	0.95	0.62	.219
22.25	-0.19	1.54	0.82	0.93	0.64	.215
22.50	-0.19	1.50	0.81	0.92	0.66	.214
22.75	-0.19	1.46	0.80	0.91	0.68	.213
23.00	-0.19	1.42	0.79	0.90	0.69	.213
23.25	-0.19	1.37	0.77	0.89	0.72	.214
23.50	-0.19	1.32	0.75	0.87	0.74	.214
23.75	-0.18	1.27	0.74	0.86	0.77	.212
24.00	-0.17	1.23	0.73	0.84	0.80	.210
24.25	-0.17	1.18	0.72	0.83	0.83	.210
24.50	-0.16	1.14	0.70	0.81	0.86	.208
24.75	-0.14	1.10	0.69	0.79	0.90	.206
25.00	-0.12	1.06	0.69	0.77	0.93	.202
25.25	-0.11	1.02	0.68	0.75	0.97	.199
25.50	-0.09	0.99	0.67	0.74	1.00	.195
25.75	-0.08	0.95	0.66	0.72	1.04	.193
26.00	-0.06	0.92	0.66	0.70	1.08	.188
26.25	-0.04	0.89	0.65	0.68	1.12	.182
26.50	-0.01	0.87	0.65	0.66	1.15	.176
26.75	0.01	0.85	0.65	0.65	1.17	.171
27.00	0.02	0.83	0.65	0.64	1.20	.168
27.25	0.04	0.81	0.65	0.62	1.23	.163
27.50	0.05	0.80	0.65	0.61	1.25	.159
27.75	0.07	0.78	0.65	0.60	1.27	.155

Rh

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Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
28.00	0.08	0.76	0.65	0.59	1.30	.152
28.50	0.11	0.73	0.65	0.56	1.34	.144
29.00	0.13	0.71	0.65	0.54	1.37	.137
29.50	0.16	0.69	0.66	0.52	1.38	.130
30.00	0.17	0.67	0.66	0.51	1.40	.127
31.00	0.17	0.62	0.64	0.49	1.50	.127
32.00	0.17	0.54	0.61	0.44	1.69	.126
33.00	0.22	0.44	0.60	0.37	1.82	.110
34.00	0.34	0.39	0.65	0.30	1.46	.074
35.00	0.41	0.39	0.69	0.28	1.23	.058
36.00	0.45	0.40	0.73	0.27	1.09	.049
37.00	0.46	0.41	0.74	0.28	1.07	.047
38.00	0.47	0.40	0.74	0.27	1.04	.045
39.00	0.49	0.38	0.75	0.25	0.98	.041