

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks Ho	
				Film	X-tal	Bulk	Prep			
FZG67	153-162	Trans, Refl		x				μ	absorption measurements	
ZFG67	60-520			x				μ	absorption measurements	
BBS71	1-45			x				$\text{Im}(\epsilon^{-1})$	energy loss spectroscopy	
Petr72	0.5-6.2			x				μ		
TC73	150-190			x				μ	energy loss spectroscopy	
KT75	0.35-2.5			Ellips	20, 97, 300	x			σ, ϵ_1	
Kun75	50-550			x				μ	absorption measurements with synchrotron radiation	
WL75	0.2-4.4			Refl	4.2		x	EP	A; σ	absorptivity measured by calorimetry
CGT76				x						energy loss spectroscopy
KN77										review paper
Liu77								review paper covering band structure, optical and photoemission properties		
Tra77	23-35		vapor	x			μ	absorption measurements of metal vapor with synchrotron radiation		
Lyn78								review paper		

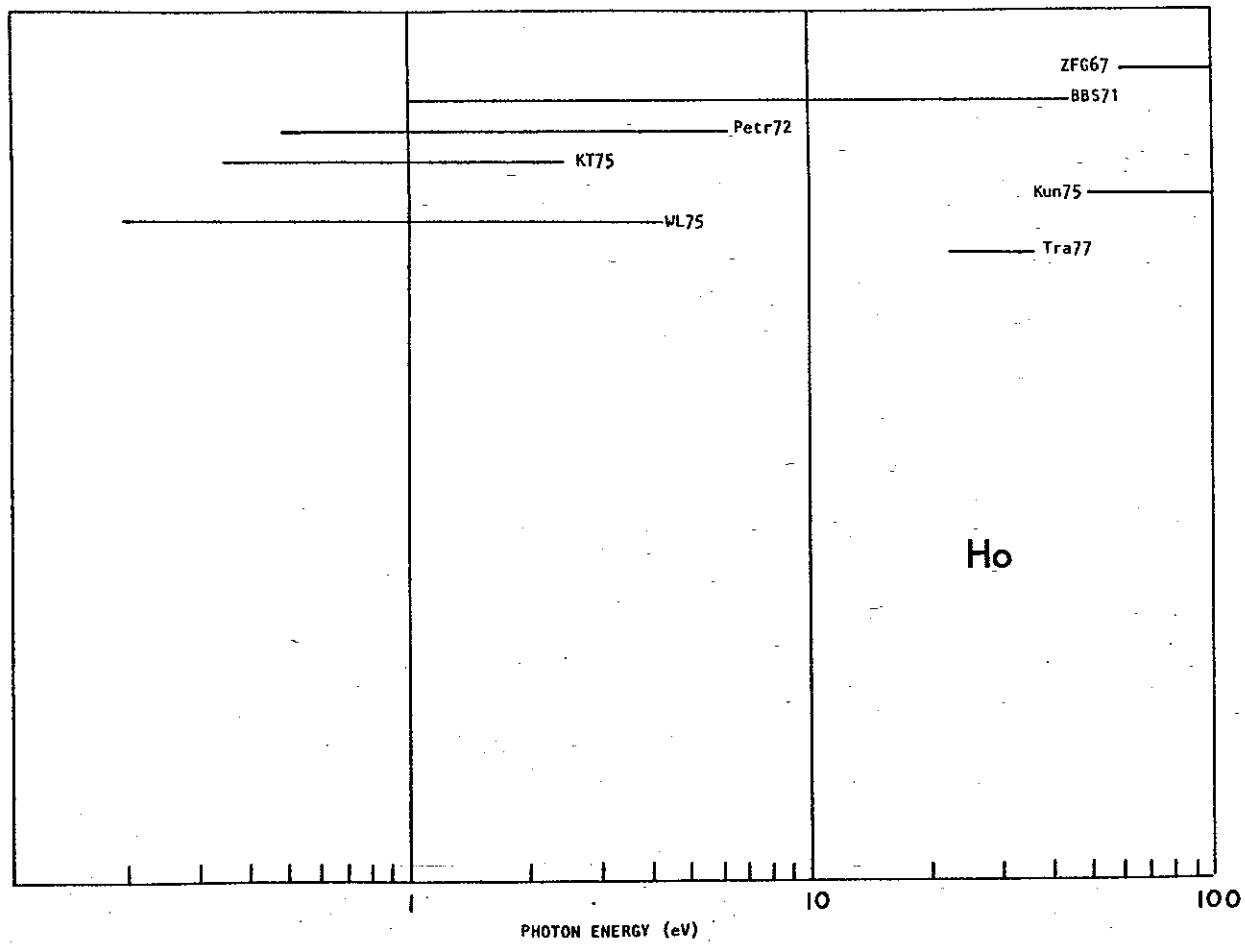


Fig. 71 Survey of available data on Ho.

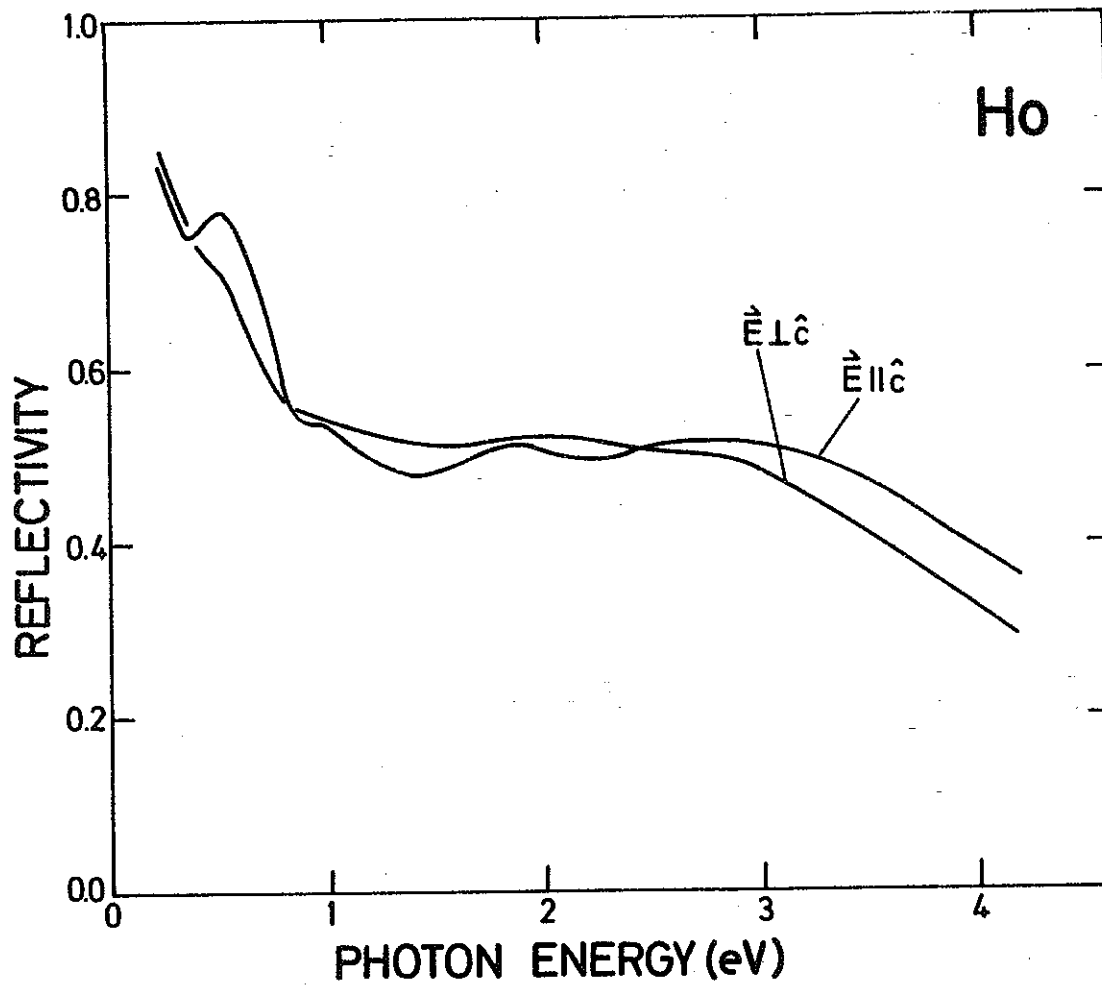


Fig. 72 Reflectivity of Ho. Single crystal results by WL75 (—) for $\vec{E} \parallel \hat{c}$ and $\vec{E} \perp \hat{c}$.

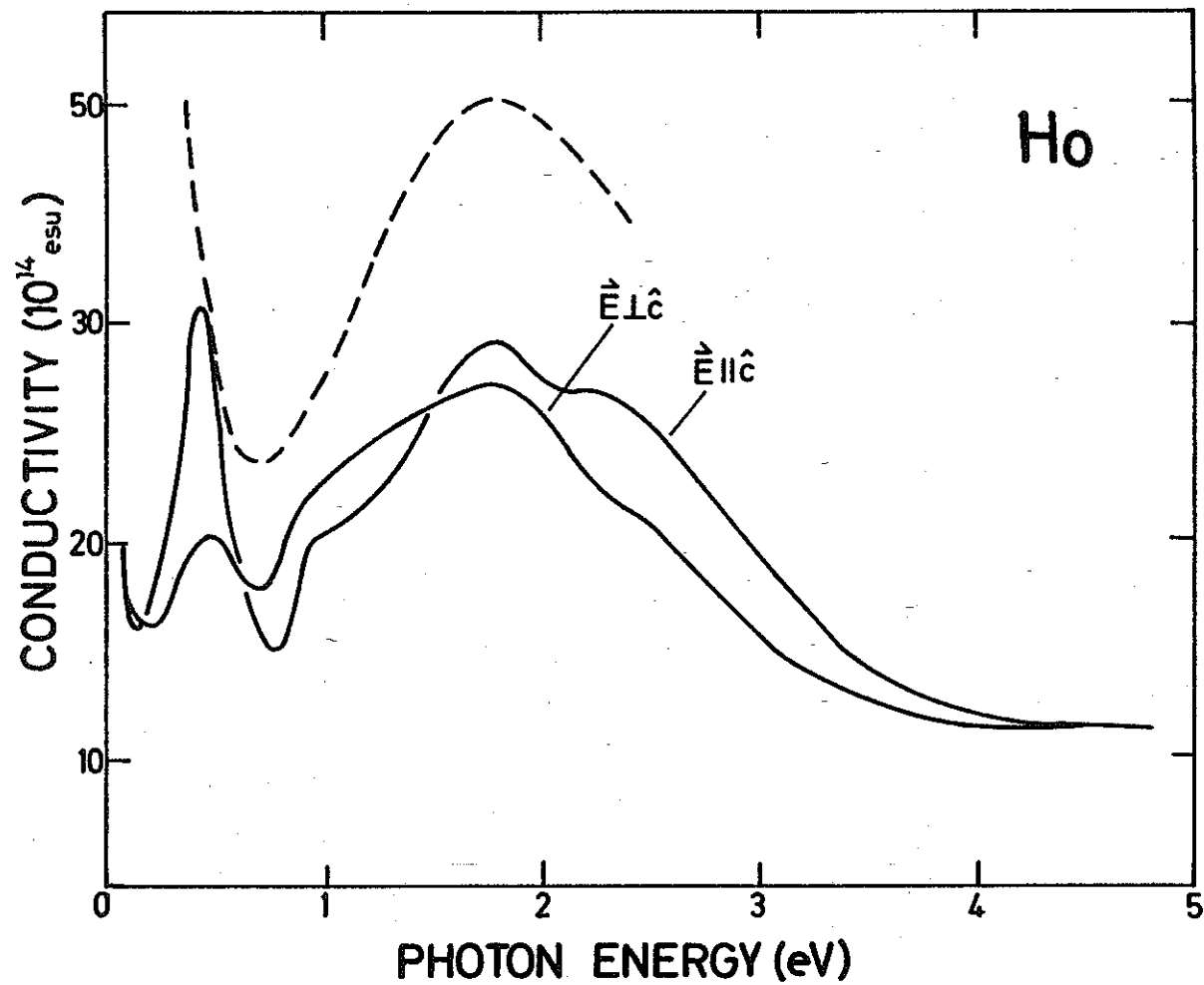


Fig. 73 Optical conductivity for Ho. Single crystal results by WL75 (—) for $\vec{E} \parallel \hat{c}$ and $\vec{E} \perp \hat{c}$; polycrystalline results by KT75 (---).

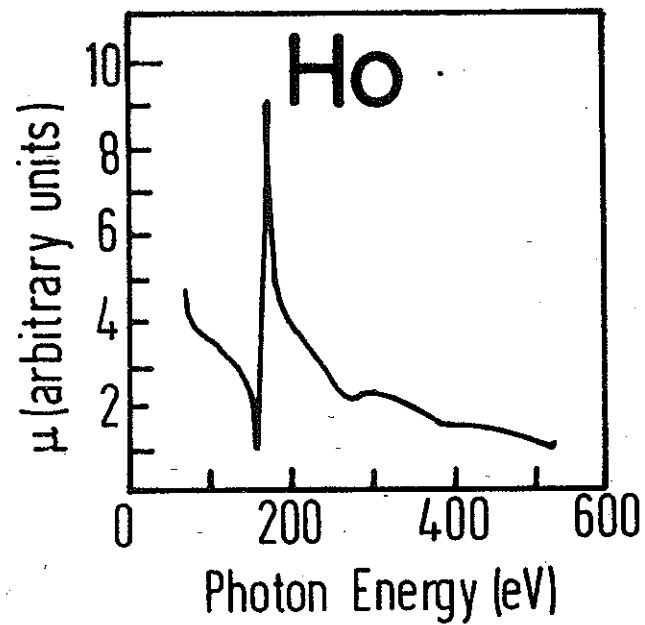
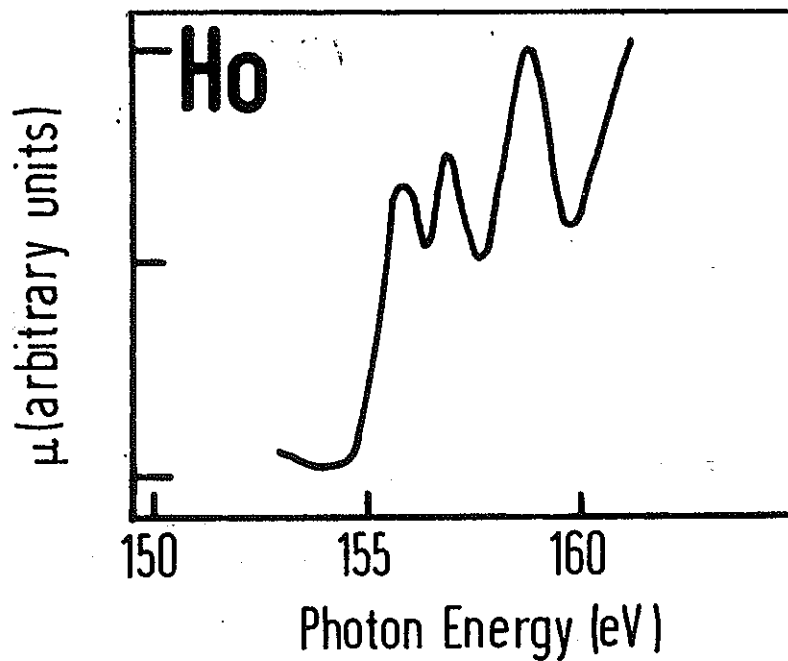


Fig. 74 Absorption coefficient of Ho. FZG67 show fine structure below the onset of the large maxima. Fine structure is interpolated by ZFG67 in the expanded energy range.

Holmium single crystal with $\bar{E}11\bar{c}$

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	Im(-1/ ϵ)	R($\phi=0$)
0.02	1504.79	532.95	39.38	4.44	0.00	.818
0.04	3174.43	806.32	56.79	5.33	0.00	.870
0.06	1394.31	315.66	37.58	4.33	0.00	.811
0.08	-766.91	192.29	3.45	1.31	0.00	.128
0.10	-480.90	143.23	3.23	1.27	0.00	.114
0.12	-328.31	116.15	3.16	1.26	0.00	.109
0.14	-238.01	99.66	3.16	1.26	0.00	.110
0.16	-180.75	85.56	3.10	1.25	0.00	.105
0.18	-140.46	74.84	3.06	1.24	0.00	.103
0.20	-111.24	67.17	3.06	1.24	0.00	.103
0.22	-89.60	60.32	3.03	1.23	0.01	.101
0.24	-71.91	56.54	3.13	1.25	0.01	.107
0.26	-59.34	53.58	3.21	1.27	0.01	.113
0.28	-49.54	51.25	3.30	1.28	0.01	.119
0.30	-42.21	49.21	3.36	1.30	0.01	.123
0.32	-36.53	47.11	3.40	1.30	0.01	.125
0.34	-31.64	45.36	3.44	1.31	0.01	.128
0.36	-28.07	43.71	3.46	1.31	0.02	.129
0.38	-24.86	42.23	3.47	1.32	0.02	.131
0.40	-22.60	40.88	3.47	1.32	0.02	.130
0.42	-20.72	39.47	3.45	1.31	0.02	.129
0.44	-19.29	38.06	3.42	1.31	0.02	.127
0.46	-18.16	36.51	3.36	1.30	0.02	.123
0.48	-17.03	34.94	3.30	1.29	0.02	.119
0.50	-16.15	33.38	3.24	1.27	0.02	.114
0.52	-15.27	31.73	3.16	1.26	0.03	.109
0.54	-14.31	30.17	3.09	1.24	0.03	.105
0.56	-13.57	28.56	3.00	1.23	0.03	.099
0.58	-12.46	26.94	2.93	1.21	0.03	.094
0.60	-11.32	25.59	2.89	1.20	0.03	.091
0.62	-10.21	24.40	2.85	1.19	0.03	.089
0.64	-9.15	23.31	2.82	1.19	0.04	.087
0.66	-7.97	22.39	2.81	1.19	0.04	.086
0.68	-6.98	21.61	2.80	1.18	0.04	.086
0.70	-5.77	20.93	2.82	1.19	0.04	.087
0.72	-4.69	20.56	2.86	1.20	0.05	.090
0.74	-3.71	20.39	2.92	1.21	0.05	.093
0.76	-2.99	20.39	2.97	1.22	0.05	.097
0.78	-2.49	20.42	3.01	1.23	0.05	.099
0.80	-2.13	20.43	3.03	1.23	0.05	.101
0.82	-1.89	20.41	3.05	1.23	0.05	.102
0.84	-1.79	20.34	3.05	1.24	0.05	.102
0.86	-1.66	20.16	3.05	1.23	0.05	.102
0.88	-1.57	20.00	3.04	1.23	0.05	.101
0.90	-1.51	19.90	3.03	1.23	0.05	.101
0.92	-1.47	19.59	3.01	1.23	0.05	.100
0.94	-1.39	19.35	3.00	1.22	0.05	.099
0.96	-1.36	19.13	2.98	1.22	0.05	.098
0.98	-1.30	18.88	2.97	1.22	0.05	.097

Ho $\tilde{E}H\hat{c}$

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\tilde{\epsilon})$	$R(\phi=0)$
1.00	-1.23	18.65	2.95	1.22	0.05	.096
1.05	-1.13	18.16	2.92	1.21	0.05	.094
1.10	-1.12	17.69	2.88	1.20	0.06	.091
1.15	-1.11	17.22	2.84	1.19	0.06	.089
1.20	-1.17	16.80	2.80	1.18	0.06	.086
1.25	-1.23	16.37	2.76	1.17	0.06	.083
1.30	-1.35	15.98	2.71	1.16	0.06	.080
1.35	-1.48	15.57	2.66	1.15	0.06	.077
1.40	-1.60	15.16	2.61	1.14	0.07	.074
1.45	-1.74	14.77	2.56	1.13	0.07	.071
1.50	-1.85	14.37	2.51	1.12	0.07	.068
1.55	-1.96	14.02	2.47	1.11	0.07	.065
1.60	-2.07	13.71	2.43	1.10	0.07	.063
1.65	-2.24	13.44	2.39	1.09	0.07	.060
1.70	-2.46	13.15	2.34	1.08	0.07	.058
1.75	-2.74	12.83	2.28	1.07	0.07	.054
1.80	-2.99	12.45	2.22	1.05	0.08	.051
1.85	-3.28	12.05	2.15	1.04	0.08	.047
1.90	-3.51	11.57	2.07	1.02	0.08	.043
1.95	-3.70	11.08	2.00	1.00	0.08	.040
2.00	-3.85	10.56	1.92	0.98	0.08	.036
2.05	-3.92	10.05	1.85	0.96	0.09	.033
2.10	-3.93	9.57	1.79	0.95	0.09	.031
2.15	-3.95	9.11	1.73	0.93	0.09	.028
2.20	-3.90	8.67	1.67	0.92	0.10	.026
2.30	-3.74	7.93	1.59	0.89	0.10	.023
2.40	-3.58	7.36	1.52	0.87	0.11	.021
2.50	-3.56	6.82	1.44	0.85	0.12	.019
2.60	-3.53	6.24	1.35	0.82	0.12	.016
2.70	-3.41	5.67	1.27	0.80	0.13	.015
2.80	-3.25	5.13	1.19	0.77	0.14	.014
2.90	-3.04	4.65	1.12	0.75	0.15	.013
3.00	-2.79	4.24	1.07	0.73	0.16	.013
3.10	-2.54	3.89	1.03	0.72	0.18	.012
3.20	-2.29	3.62	1.00	0.71	0.20	.012
3.30	-2.09	3.37	0.97	0.70	0.21	.012
3.40	-1.89	3.16	0.95	0.69	0.23	.013
3.50	-1.69	2.96	0.93	0.68	0.25	.013
3.60	-1.50	2.80	0.92	0.68	0.28	.013
3.70	-1.33	2.67	0.91	0.67	0.30	.013
3.80	-1.17	2.55	0.90	0.67	0.32	.013
3.90	-1.03	2.44	0.90	0.67	0.35	.013
4.00	-0.88	2.35	0.90	0.67	0.37	.013
4.10	-0.76	2.29	0.91	0.67	0.39	.013
4.20	-0.65	2.23	0.91	0.68	0.41	.013
4.30	-0.56	2.18	0.92	0.68	0.43	.013
4.40	-0.48	2.13	0.92	0.68	0.45	.013
4.50	-0.42	2.09	0.93	0.68	0.46	.013
4.60	-0.36	2.03	0.92	0.68	0.48	.013
4.80	-0.25	1.93	0.92	0.68	0.51	.013
5.00	-0.16	1.83	0.92	0.68	0.54	.013

Holmium 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	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-473.26	139.73	3.18	1.26	0.00	.111
0.12	-319.14	111.11	3.07	1.24	0.00	.103
0.14	-225.53	93.88	3.06	1.24	0.00	.103
0.16	-164.81	83.86	3.17	1.26	0.00	.110
0.18	-124.16	77.11	3.32	1.29	0.00	.120
0.20	-95.64	71.17	3.43	1.31	0.01	.128
0.22	-73.61	67.96	3.65	1.35	0.01	.142
0.24	-57.96	66.26	3.88	1.39	0.01	.158
0.26	-47.49	64.23	4.02	1.42	0.01	.168
0.28	-38.93	62.00	4.14	1.44	0.01	.175
0.30	-31.43	60.65	4.29	1.47	0.01	.186
0.32	-26.04	60.17	4.45	1.49	0.01	.196
0.34	-21.90	60.28	4.60	1.52	0.01	.205
0.36	-19.48	61.17	4.73	1.54	0.01	.214
0.38	-19.54	62.11	4.77	1.54	0.01	.217
0.40	-21.10	61.90	4.71	1.53	0.01	.212
0.42	-23.31	60.37	4.55	1.51	0.01	.202
0.44	-25.53	57.79	4.34	1.47	0.01	.189
0.46	-27.87	54.18	4.07	1.43	0.01	.170
0.48	-29.43	49.51	3.75	1.37	0.01	.149
0.50	-29.86	44.35	3.44	1.31	0.02	.128
0.52	-28.99	39.45	3.16	1.26	0.02	.109
0.54	-27.40	35.35	2.94	1.21	0.02	.095
0.56	-25.76	31.76	2.75	1.17	0.02	.083
0.58	-23.74	28.68	2.60	1.14	0.02	.073
0.60	-21.68	26.18	2.48	1.11	0.02	.066
0.62	-19.75	24.01	2.38	1.09	0.02	.060
0.64	-17.74	22.24	2.31	1.08	0.03	.056
0.66	-15.91	20.78	2.27	1.06	0.03	.054
0.68	-14.19	19.54	2.23	1.06	0.03	.052
0.70	-12.59	18.41	2.20	1.05	0.04	.050
0.72	-10.86	17.52	2.21	1.05	0.04	.051
0.74	-9.33	16.88	2.23	1.06	0.05	.052
0.76	-7.91	16.35	2.26	1.06	0.05	.054
0.78	-6.52	15.92	2.31	1.08	0.05	.056
0.80	-5.00	15.74	2.40	1.10	0.06	.061
0.82	-3.72	15.91	2.51	1.12	0.06	.068
0.84	-2.72	16.30	2.63	1.15	0.06	.075
0.86	-2.19	16.79	2.71	1.17	0.06	.080
0.88	-1.82	17.13	2.78	1.18	0.06	.084
0.90	-1.72	17.42	2.81	1.19	0.06	.086
0.92	-1.70	17.52	2.82	1.19	0.06	.087
0.94	-1.76	17.49	2.81	1.19	0.06	.087
0.96	-1.79	17.31	2.79	1.18	0.06	.085
0.98	-1.76	17.04	2.77	1.18	0.06	.084
1.00	-1.62	16.76	2.76	1.17	0.06	.083
1.05	-1.28	16.22	2.74	1.17	0.06	.082
1.10	-0.93	15.74	2.72	1.17	0.06	.081
1.15	-0.65	15.35	2.71	1.16	0.07	.080

Ho $\bar{E}Lc$

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
1.20	-0.38	14.96	2.70	1.16	0.07	.079
1.25	-0.07	14.65	2.70	1.16	0.07	.079
1.30	0.14	14.46	2.70	1.16	0.07	.080
1.35	0.34	14.30	2.71	1.16	0.07	.080
1.40	0.54	14.26	2.72	1.17	0.07	.081
1.45	0.54	14.38	2.73	1.17	0.07	.082
1.50	0.34	14.47	2.72	1.17	0.07	.081
1.55	0.10	14.46	2.70	1.16	0.07	.079
1.60	-0.27	14.45	2.66	1.15	0.07	.077
1.65	-0.72	14.29	2.61	1.14	0.07	.074
1.70	-1.06	14.04	2.55	1.13	0.07	.070
1.75	-1.53	13.81	2.49	1.12	0.07	.066
1.80	-1.98	13.43	2.41	1.10	0.07	.062
1.85	-2.43	12.94	2.32	1.08	0.07	.057
1.90	-2.70	12.31	2.23	1.05	0.08	.052
1.95	-2.76	11.72	2.15	1.04	0.08	.048
2.00	-2.78	11.25	2.10	1.02	0.08	.045
2.05	-2.73	10.85	2.06	1.01	0.09	.043
2.10	-2.71	10.55	2.02	1.01	0.09	.041
2.15	-2.73	10.31	1.99	1.00	0.09	.040
2.20	-2.82	10.07	1.95	0.99	0.09	.038
2.30	-3.01	9.55	1.87	0.97	0.10	.034
2.40	-3.27	9.00	1.78	0.94	0.10	.030
2.50	-3.47	8.36	1.67	0.91	0.10	.026
2.60	-3.62	7.68	1.56	0.88	0.11	.022
2.70	-3.64	7.00	1.46	0.85	0.11	.019
2.80	-3.59	6.38	1.37	0.83	0.12	.017
2.90	-3.49	5.81	1.28	0.80	0.13	.015
3.00	-3.35	5.29	1.21	0.78	0.13	.014
3.10	-3.20	4.82	1.14	0.75	0.14	.013
3.20	-3.02	4.37	1.07	0.73	0.15	.013
3.30	-2.80	3.98	1.02	0.71	0.17	.012
3.40	-2.58	3.65	0.97	0.70	0.18	.012
3.50	-2.35	3.36	0.94	0.68	0.20	.013
3.60	-2.13	3.12	0.91	0.67	0.22	.013
3.70	-1.91	2.92	0.89	0.67	0.24	.013
3.80	-1.72	2.76	0.88	0.66	0.26	.013
3.90	-1.54	2.62	0.87	0.66	0.28	.013
4.00	-1.38	2.49	0.86	0.65	0.31	.013
4.10	-1.23	2.37	0.85	0.65	0.33	.014
4.20	-1.06	2.29	0.86	0.65	0.36	.013
4.30	-0.96	2.22	0.85	0.65	0.38	.014
4.40	-0.84	2.16	0.86	0.66	0.40	.013
4.50	-0.76	2.10	0.86	0.66	0.42	.013
4.60	-0.69	2.03	0.85	0.65	0.44	.014
4.80	-0.52	1.90	0.85	0.65	0.49	.014
5.00	-0.40	1.79	0.85	0.65	0.53	.014