

Authors	Energy Range (eV)	Technique	Temperature (K) RT unless specified	Sample				Data Presentation	Remarks Sc
				Film	X-tal	Bulk	Prep		
BCF75	~0-~60			x				$\text{Im}(\epsilon^{-1})$; KK: $\epsilon_1, \epsilon_2, \mu$	energy loss spectroscopy
We077	0.2-5	Ref1	4.2		x	x	EP	A; KK: σ	absorption measured by calorimetry
CGW80	2-160	Trans		x				μ	electron energy loss spectroscopy
OTM80	0-60	Trans			x			$\text{Im}(\epsilon^{-1})$	energy loss spectroscopy

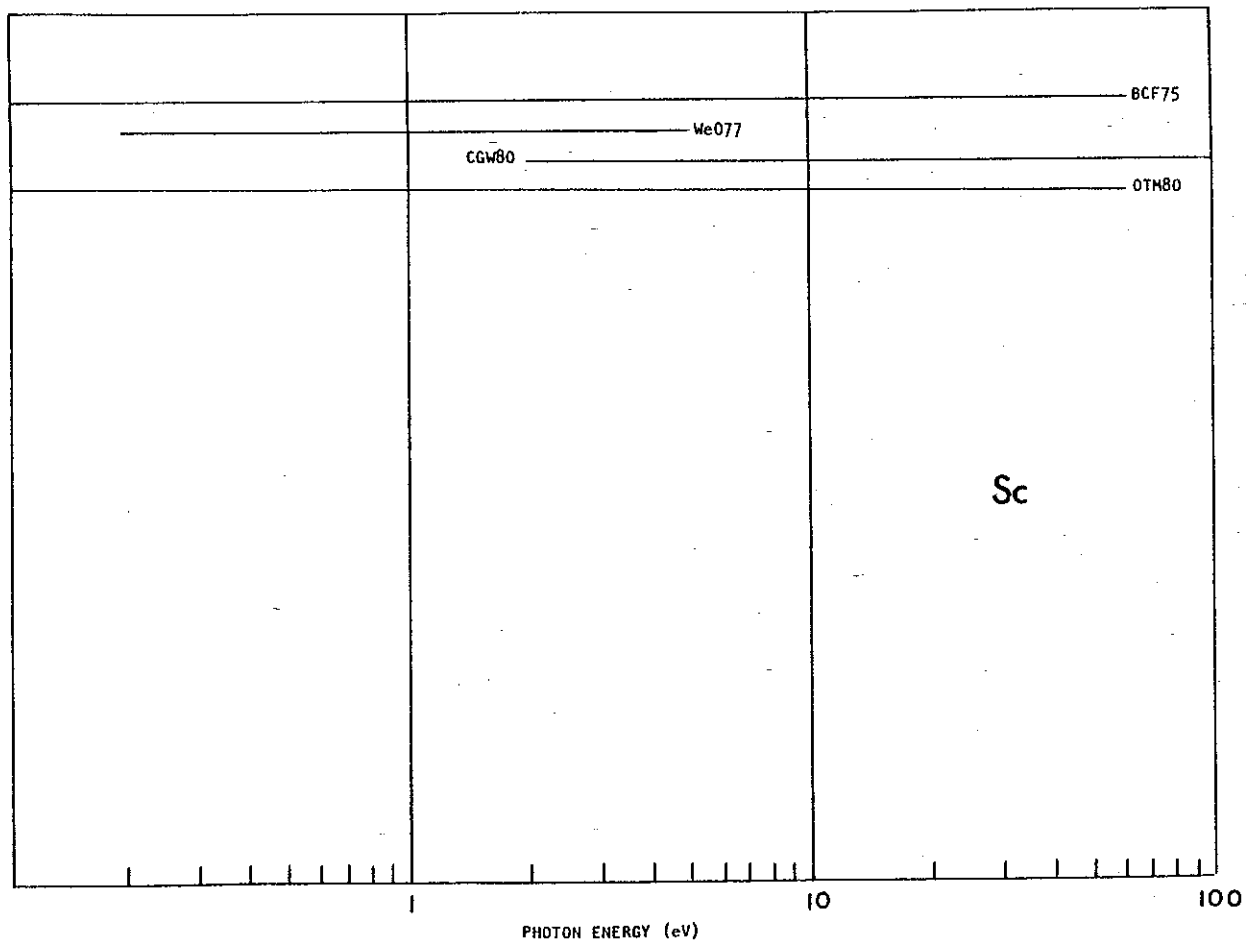


Fig. 22 Survey of available data on Sc.

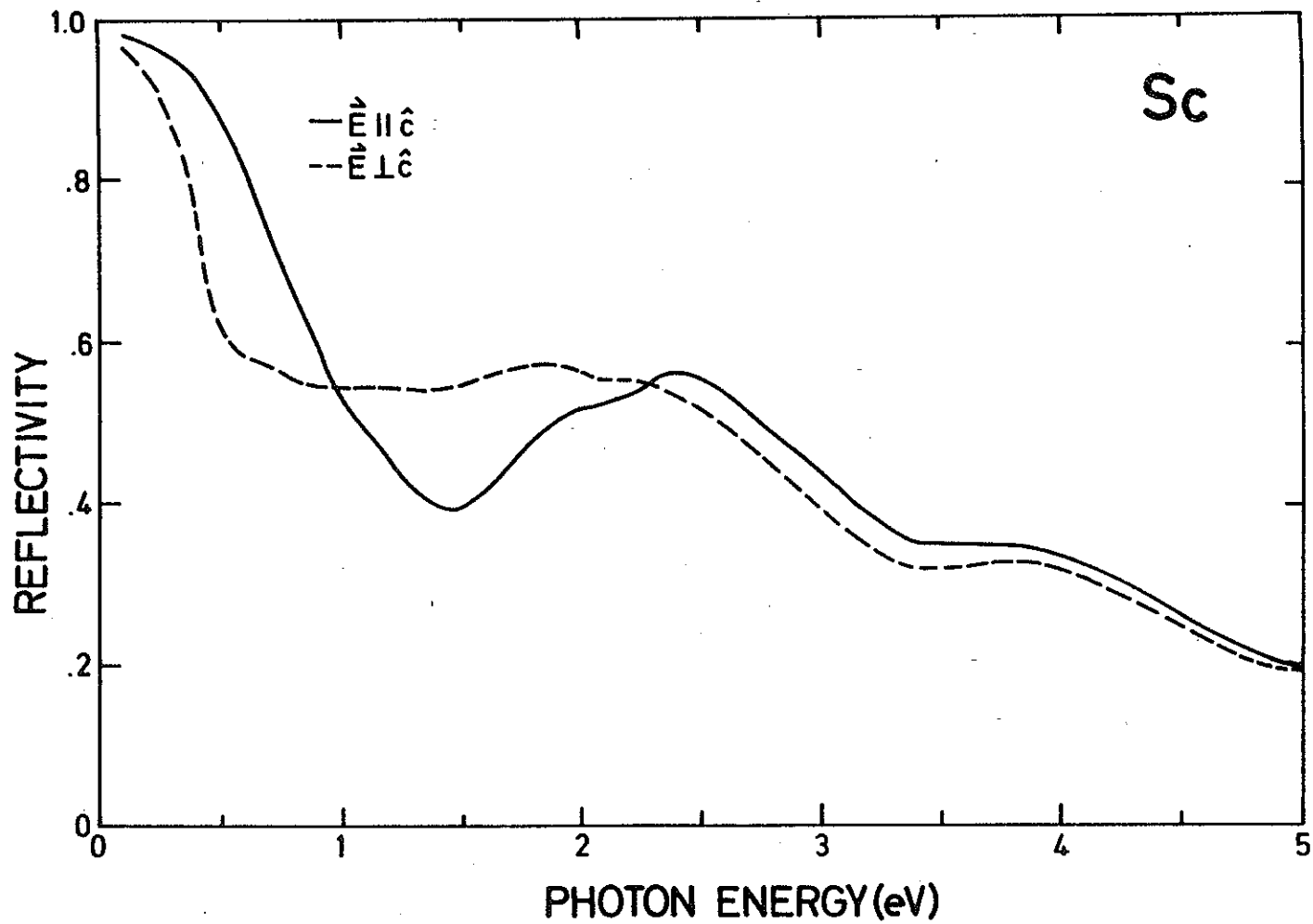


Fig. 23 Reflectivity for Sc. Single crystal results by W077 for $\vec{E} \parallel \hat{c}$ (—) and $\vec{E} \perp \hat{c}$ (---).

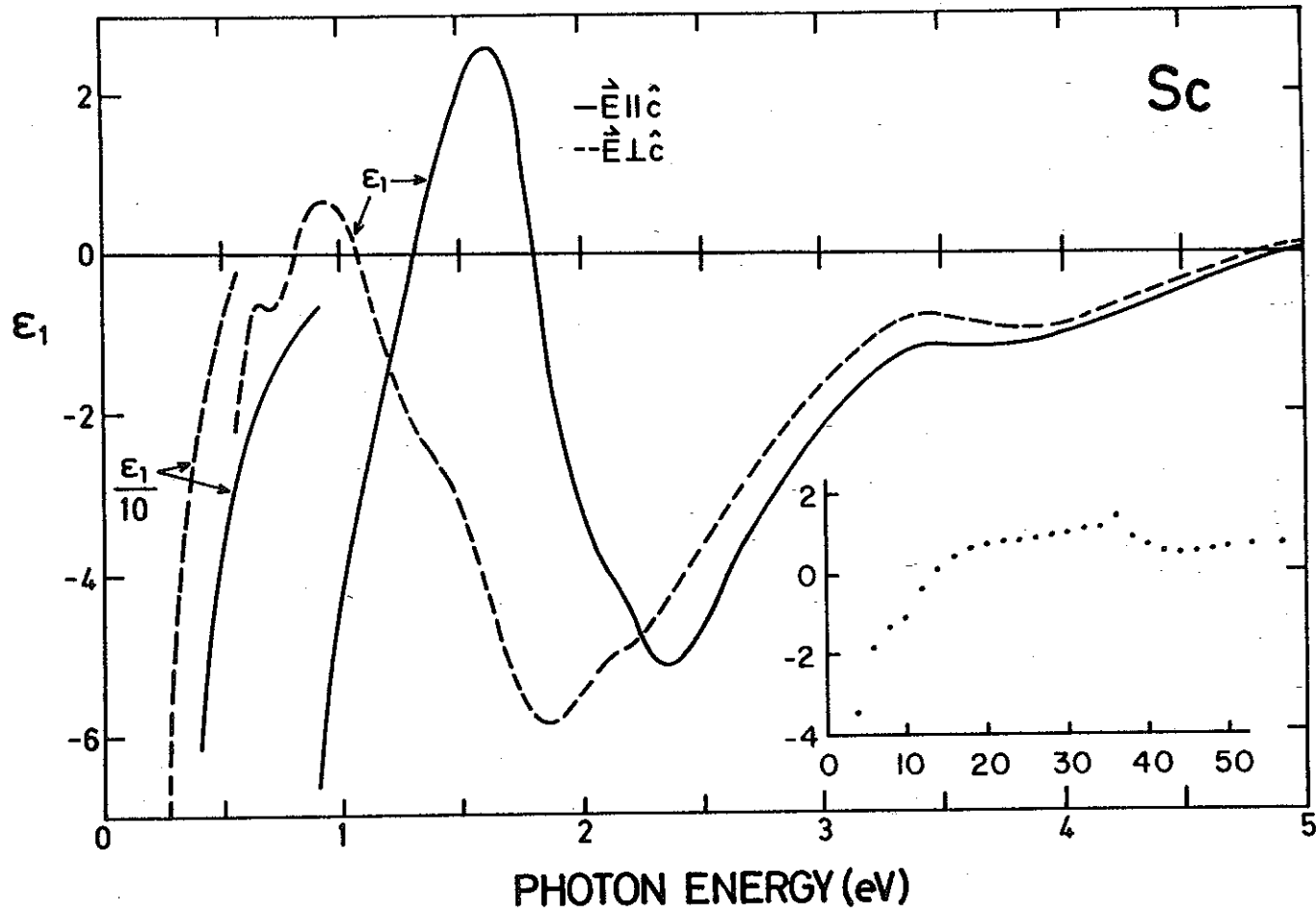


Fig. 24 ϵ_1 for Sc. Single crystal results by W077 for $\vec{E} \parallel \hat{c}$ (—) and $\vec{E} \perp \hat{c}$ (---); polycrystalline results by CGW80 (···) derived from electron energy loss measurements.

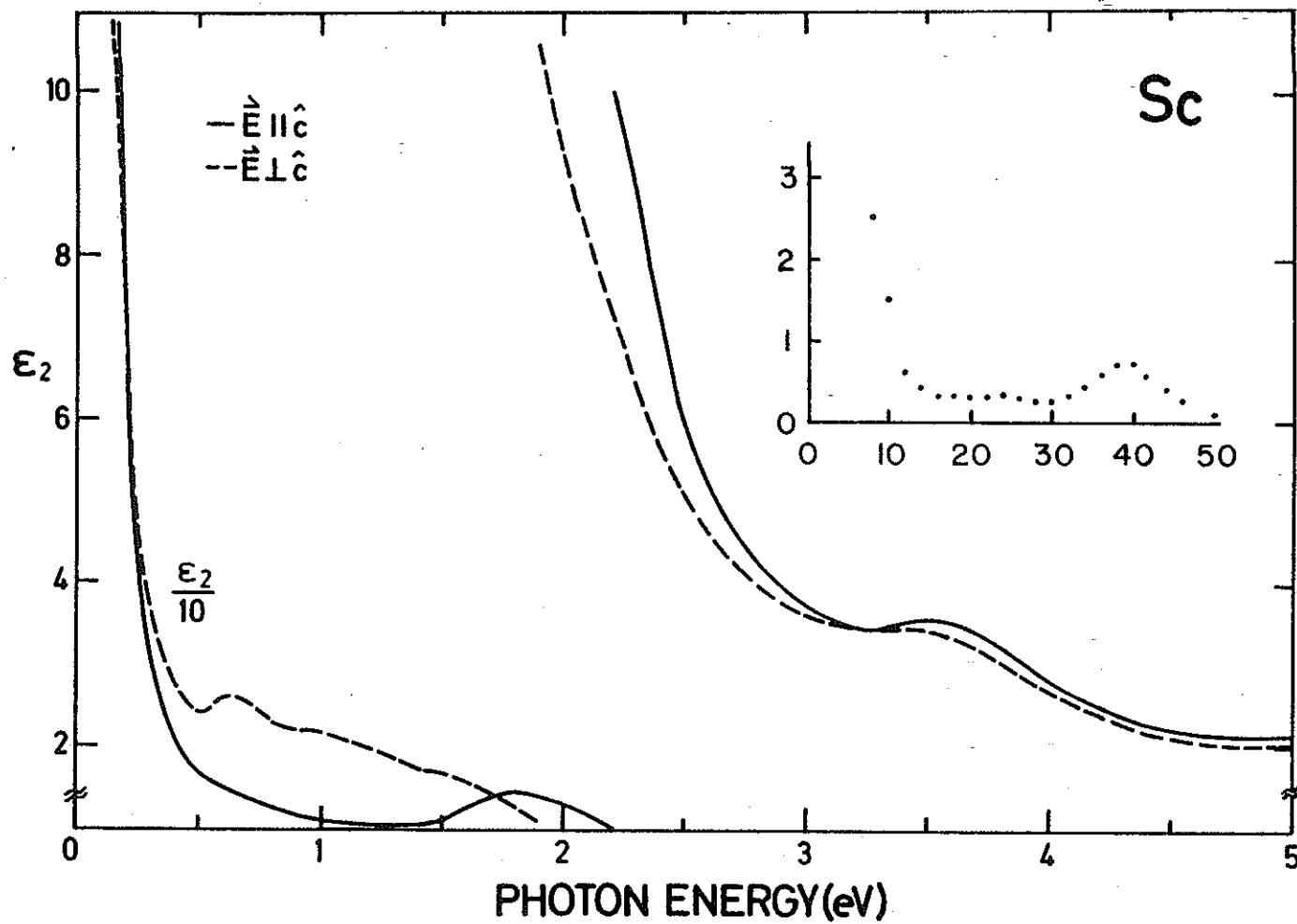


Fig. 25 ϵ_2 for Sc. Single crystal results by W077 for $\vec{E} \parallel \hat{c}$ (—) and $\vec{E} \perp \hat{c}$ (---); polycrystalline results by CGW80 (···) derived from electron energy loss measurements.

Scandium single crystal with $\vec{E} \parallel \vec{c}$

publication by J.H. Weaver and C.G. Olson in Phys. Rev. B 16, 731 (1977)
based on the following tabulation

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\epsilon)$	$R(\phi=0)$
0.10	-1001.53	323.54	5.05	32.05	0.00	.941
0.13	-662.05	198.66	3.82	26.01	0.00	.973
0.15	-469.86	135.05	3.08	21.90	0.00	.975
0.17	-351.49	98.02	2.59	18.93	0.00	.972
0.20	-272.07	71.36	2.14	16.53	0.00	.970
0.25	-173.00	43.62	1.64	13.26	0.00	.964
0.30	-117.34	31.25	1.43	10.93	0.00	.954
0.35	-83.59	24.44	1.32	9.24	0.00	.942
0.40	-61.42	20.33	1.24	7.94	0.00	.925
0.45	-46.28	18.40	1.33	6.93	0.01	.901
0.50	-35.87	16.69	1.36	6.14	0.01	.874
0.55	-28.13	15.77	1.43	5.49	0.02	.841
0.50	-22.59	14.85	1.49	4.98	0.02	.808
0.65	-18.24	14.10	1.55	4.54	0.03	.771
0.70	-14.87	13.52	1.52	4.18	0.03	.734
0.75	-12.31	12.89	1.66	3.88	0.04	.700
0.80	-10.15	12.22	1.69	3.61	0.05	.666
0.85	-8.13	11.77	1.76	3.35	0.06	.627
0.90	-6.63	11.38	1.81	3.15	0.07	.593
0.95	-5.20	11.06	1.87	2.95	0.07	.558
1.00	-3.98	10.95	1.96	2.80	0.08	.527
1.05	-3.23	10.88	2.02	2.70	0.08	.508
1.10	-2.57	10.65	2.05	2.60	0.09	.490
1.15	-1.95	10.39	2.08	2.50	0.09	.472
1.20	-1.34	10.12	2.11	2.40	0.10	.454
1.25	-0.66	9.89	2.15	2.30	0.10	.435
1.30	-0.02	9.78	2.21	2.21	0.10	.419
1.35	0.66	9.74	2.28	2.13	0.10	.404
1.40	1.29	9.90	2.37	2.08	0.10	.396
1.45	1.84	10.20	2.47	2.07	0.09	.394
1.50	2.27	10.64	2.56	2.08	0.09	.397
1.55	2.55	11.24	2.65	2.12	0.08	.405
1.60	2.62	11.97	2.73	2.19	0.08	.417
1.65	2.33	12.78	2.77	2.31	0.08	.433
1.70	1.76	13.44	2.77	2.43	0.07	.449
1.75	0.88	13.94	2.72	2.56	0.07	.466
1.80	-0.07	14.07	2.54	2.66	0.07	.480
1.85	-1.12	13.96	2.54	2.75	0.07	.494
1.90	-2.01	13.51	2.41	2.80	0.07	.505
1.95	-2.67	12.94	2.30	2.82	0.07	.512
2.00	-3.20	12.36	2.19	2.83	0.08	.518
2.05	-3.64	11.76	2.08	2.82	0.08	.523
2.10	-3.98	11.15	1.98	2.81	0.08	.528
2.15	-4.23	10.59	1.89	2.80	0.08	.532
2.20	-4.51	10.05	1.80	2.79	0.08	.538
2.25	-4.81	9.45	1.70	2.78	0.08	.546
2.30	-5.07	8.73	1.59	2.75	0.09	.556
2.35	-5.13	7.95	1.47	2.70	0.09	.561
2.40	-5.05	7.21	1.37	2.63	0.09	.563

Sc $\tilde{\epsilon}_{II\hat{c}}$

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\tilde{\epsilon})$	$R(\phi=0)$
2.45	-4.34	5.57	1.29	2.55	0.10	.551
2.50	-4.59	5.99	1.22	2.45	0.11	.557
2.60	-3.95	5.18	1.13	2.29	0.12	.538
2.70	-3.40	4.64	1.09	2.14	0.14	.514
2.80	-2.94	4.24	1.05	2.01	0.15	.490
2.90	-2.51	3.95	1.04	1.90	0.16	.463
3.00	-2.15	3.73	1.04	1.80	0.20	.438
3.10	-1.84	3.56	1.04	1.71	0.22	.413
3.20	-1.55	3.45	1.06	1.63	0.24	.387
3.30	-1.30	3.41	1.09	1.57	0.25	.364
3.40	-1.15	3.42	1.11	1.54	0.26	.351
3.50	-1.13	3.41	1.11	1.54	0.26	.349
3.60	-1.14	3.32	1.09	1.52	0.27	.349
3.70	-1.15	3.14	1.06	1.51	0.28	.349
3.80	-1.13	3.02	1.02	1.48	0.29	.347
3.90	-1.08	2.84	0.99	1.43	0.31	.342
4.00	-1.00	2.66	0.96	1.38	0.33	.333
4.10	-0.89	2.51	0.94	1.33	0.35	.321
4.20	-0.79	2.38	0.93	1.28	0.38	.309
4.30	-0.68	2.26	0.92	1.23	0.41	.294
4.40	-0.55	2.16	0.92	1.18	0.44	.276
4.50	-0.42	2.09	0.92	1.13	0.46	.257
4.60	-0.31	2.04	0.94	1.09	0.48	.241
4.70	-0.21	2.00	0.95	1.05	0.49	.226
4.80	-0.10	1.98	0.97	1.02	0.50	.212
4.90	-0.02	1.99	0.99	1.00	0.50	.202
5.00	0.03	2.00	1.01	0.99	0.50	.196

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

publication by J.H. Weaver and C.G. Olson in Phys. Rev. B 16, 731 (1977)
 Based on the following tabulation

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
0.10	-514.30	234.48	5.05	23.23	0.00	.965
0.13	-335.80	150.84	4.02	18.76	0.00	.957
0.15	-234.71	109.68	3.49	15.71	0.00	.948
0.17	-173.33	82.64	3.06	13.52	0.00	.939
0.20	-130.54	64.35	2.74	11.75	0.00	.928
0.25	-79.08	46.91	2.54	9.25	0.01	.896
0.30	-50.99	36.88	2.44	7.55	0.01	.858
0.35	-33.31	31.31	2.49	6.29	0.01	.897
0.40	-22.01	27.36	2.56	5.34	0.02	.752
0.45	-13.41	24.82	2.72	4.56	0.03	.686
0.50	-6.14	24.01	4.05	3.43	0.04	.617
0.55	-2.21	24.80	3.37	3.68	0.04	.587
0.60	-0.82	25.88	3.54	3.65	0.04	.583
0.65	-0.65	25.91	3.56	3.64	0.04	.582
0.70	-0.77	25.07	3.49	3.60	0.04	.578
0.75	-0.45	23.81	3.42	3.48	0.04	.568
0.80	0.18	22.85	3.39	3.37	0.04	.557
0.85	0.54	22.38	3.39	3.31	0.04	.551
0.90	0.69	21.98	3.37	3.26	0.05	.547
0.95	0.64	21.67	3.34	3.24	0.05	.545
1.00	0.47	21.36	3.30	3.23	0.05	.544
1.05	0.08	21.08	3.25	3.24	0.05	.545
1.10	-0.42	20.65	3.19	3.25	0.05	.546
1.15	-0.86	20.12	3.11	3.24	0.05	.546
1.20	-1.37	19.58	3.02	3.24	0.05	.547
1.25	-1.84	18.91	2.93	3.23	0.05	.547
1.30	-2.13	18.19	2.84	3.20	0.05	.545
1.35	-2.38	17.50	2.76	3.16	0.06	.543
1.40	-2.11	17.01	2.74	3.10	0.06	.536
1.45	-2.72	17.02	2.69	3.16	0.06	.544
1.50	-3.19	16.52	2.61	3.16	0.06	.547
1.55	-3.67	16.04	2.53	3.17	0.06	.551
1.60	-4.20	15.51	2.44	3.18	0.06	.556
1.65	-4.76	14.85	2.33	3.19	0.06	.562
1.70	-5.22	14.05	2.21	3.18	0.06	.567
1.75	-5.57	13.17	2.09	3.15	0.06	.571
1.80	-5.74	12.28	1.98	3.11	0.07	.573
1.85	-5.82	11.41	1.87	3.05	0.07	.574
1.90	-5.77	10.58	1.77	2.98	0.07	.573
1.95	-5.62	9.84	1.69	2.91	0.08	.579
2.00	-5.40	9.21	1.62	2.84	0.08	.565
2.05	-5.19	8.70	1.57	2.77	0.08	.560
2.10	-5.03	8.26	1.52	2.71	0.09	.556
2.15	-4.94	7.83	1.47	2.66	0.09	.555
2.20	-4.86	7.36	1.41	2.62	0.09	.555
2.25	-4.71	6.86	1.34	2.55	0.10	.553
2.30	-4.50	6.42	1.29	2.48	0.10	.549
2.35	-4.29	6.01	1.24	2.42	0.11	.542
2.40	-4.04	5.66	1.21	2.34	0.12	.534

Sc $\bar{\epsilon}$ \hat{c}

Energy (eV)	ϵ_1	ϵ_2	n	k	$\text{Im}(-1/\bar{\epsilon})$	$R(\phi=0)$
2.45	-3.81	5.34	1.17	2.28	0.12	.525
2.50	-3.57	5.05	1.14	2.21	0.13	.517
2.60	-3.09	4.60	1.11	2.08	0.15	.494
2.70	-2.65	4.26	1.09	1.96	0.17	.469
2.80	-2.27	3.99	1.08	1.85	0.19	.444
2.90	-1.92	3.79	1.08	1.76	0.21	.417
3.00	-1.62	3.63	1.09	1.67	0.23	.393
3.10	-1.34	3.52	1.10	1.60	0.25	.367
3.20	-1.08	3.46	1.13	1.53	0.26	.345
3.30	-0.88	3.47	1.16	1.49	0.27	.326
3.40	-0.76	3.52	1.19	1.48	0.27	.316
3.50	-0.79	3.54	1.19	1.49	0.27	.321
3.60	-0.84	3.48	1.17	1.49	0.27	.324
3.70	-0.90	3.36	1.13	1.48	0.28	.327
3.80	-0.92	3.19	1.10	1.46	0.29	.327
3.90	-0.92	3.00	1.05	1.42	0.30	.325
4.00	-0.87	2.80	1.02	1.38	0.33	.318
4.10	-0.76	2.63	1.00	1.32	0.35	.305
4.20	-0.67	2.49	0.98	1.27	0.37	.293
4.30	-0.55	2.37	0.97	1.22	0.40	.277
4.40	-0.43	2.27	0.97	1.17	0.43	.251
4.50	-0.33	2.19	0.97	1.13	0.45	.246
4.60	-0.20	2.12	0.98	1.08	0.47	.228
4.70	-0.08	2.09	1.00	1.04	0.48	.213
4.80	0.03	2.09	1.03	1.01	0.48	.200
4.90	0.10	2.10	1.05	1.00	0.47	.193
5.00	0.17	2.12	1.07	0.99	0.47	.187