

Effect of Pressure on Interband Reflectivity Spectra of Germanium Semiconductors

Physical Review

155, 703-711

DOI: [10.1103/physrev.155.703](https://doi.org/10.1103/physrev.155.703)

Citation Report

#	ARTICLE		IF	CITATIONS
1	A pseudopotential examination of the pressure coefficients of optical transitions in semiconductors. Journal of Physics and Chemistry of Solids, 1967, 28, 1441-1450.		4.0	36
2	Optical Properties of GeSi Alloys in the Energy Region from 1 to 13 eV. Physica Status Solidi (B): Basic Research, 1968, 27, 57-67.		1.5	43
3	Piezo-Electroreflectance in Ge, GaAs, and Si. Physical Review, 1968, 172, 816-837.		2.7	835
4	High-Resolution Study of the One-Electron Spectrum of Si. Physical Review, 1968, 171, 916-924.		2.7	57
5	Piezoreflectance of Germanium from 1.9 to 2.8 eV. Physical Review, 1969, 185, 1103-1114.		2.7	64
6	Quantum Dielectric Theory of Electronegativity in Covalent Systems. II. Ionization Potentials and Interband Transition Energies. Physical Review, 1969, 187, 1007-1020.		2.7	603
7	Electroreflectance spectra of GaAs at hydrostatic pressure. Solid State Communications, 1970, 8, 1111-1113.		1.9	20
8	The pressure coefficient of the infra-red refractive index of germanium. Physica, 1970, 45, 619-625.		0.9	14
9	Band structure of silicon by Pseudo-OPW. Journal of Physics and Chemistry of Solids, 1970, 31, 2317-2327.		4.0	7
10	Stress Dependence of the $\langle i \rangle E_{11}^{11}$ and $\langle i \rangle E_{11}^{11} + \hat{I}_{11}^{11}$ Transitions in InSb and GaSb. Physica Status Solidi (B): Basic Research, 1970, 40, 227-234.		1.5	26
11	Deformation Potentials of the Indirect and Direct Absorption Edges of AlSb. Physical Review B, 1970, 1, 1436-1442.		3.2	46
12	Influence of Hydrostatic Pressure and Temperature on the Deep Donor Levels of Sulfur in Silicon. Physical Review B, 1970, 2, 1899-1917.		3.2	39
13	Spectroscopic Analysis of Cohesive Energies and Heats of Formation of Tetrahedrally Coordinated Semiconductors. Physical Review B, 1970, 2, 2147-2160.		3.2	255
14	Calculation of Energy-Band Pressure Coefficients from the Dielectric Theory of the Chemical Bond. Physical Review Letters, 1971, 26, 184-188.		7.8	306
15	Gallium Phosphide., 1971, , 66-76.			0
16	Resonant Raman scattering in germanium and zincblende-type semiconductors temperature dependence. Solid State Communications, 1971, 9, 1235-1238.		1.9	16
17	Electroreflectance in GeSi alloys under hydrostatic pressure. Solid State Communications, 1971, 9, 1187-1191.		1.9	39
18	Gallium Antimonide., 1971, , 35-44.			0

#	ARTICLE	IF	CITATIONS
19	Indium Antimonide. , 1971, , 77-92.		3
20	Pressure and Temperature Dependence of the Absorption Edge in GaN. Journal of Applied Physics, 1971, 42, 4438-4443.	2.5	60
21	Volume Dependence of the Spin-Orbit Splitting in Representative Semiconductors from High-Pressure Electroreflectivity Measurements and Relativistic Orthogonalized-Plane-Wave Calculations. Physical Review B, 1971, 3, 3257-3266.	3.2	28
22	Intrinsic Piezobirefringence in GaSb, InAs, and InSb. Physical Review B, 1971, 3, 340-346.	3.2	59
23	Gunn Effect in InAs Under Hydrostatic Pressure. Journal of Applied Physics, 1971, 42, 2064-2067.	2.5	10
24	Piezo-optical Evidence for $\hat{\sigma}$ -Transitions at the 3.4-eV Optical Structure of Silicon. Physical Review Letters, 1972, 29, 789-792.	7.8	64
25	Piezoemission of GaSb: Impurities and Bound Excitons. Physical Review B, 1972, 5, 4900-4910.	3.2	51
26	The Lowest Conduction Band Minima of $A_{2-}B_{4+}C_4$ -Type Semiconductors. Physica Status Solidi (B): Basic Research, 1972, 53, 745-752.	1.5	51
27	The pressure dependence of the E 2 reflectivity peak and of the dielectric constant in III-V semiconductors. European Physical Journal D, 1972, 22, 841-846.	0.4	6
28	Energy band structure and modulation spectra of $A_2B_4C_2$ semiconductors. Surface Science, 1973, 37, 730-747.	1.9	90
29	Electrical properties of InAs to very high pressures. Journal of Physics C: Solid State Physics, 1973, 6, 274-284.	1.5	19
30	Pressure dependence of energy gaps and refractive indices of tetrahedrally bonded semiconductors. Physical Review B, 1974, 10, 1476-1481.	3.2	175
31	Bond-orbital model. II. Physical Review B, 1974, 10, 1516-1527.	3.2	267
32	Pressure Dependence of the Forbidden Energy Gap in $ZnSiAs_{2-}$ and $ZnSiP_{2-}$. Physica Status Solidi (B): Basic Research, 1974, 62, K13.	1.5	4
33	The pressure and temperature dependence of electron energy-gaps in semiconductor alloys. Solid State Communications, 1975, 17, 739-742.	1.9	11
34	The effect of pressure on impact ionisation and the Gunn effect in InAs. Solid State Communications, 1975, 16, 1359-1363.	1.9	6
35	Strahlende Rekombination und optische Eigenschaften von GaP. Fortschritte Der Physik, 1975, 23, 317-398.	4.4	27
36	ELECTRONIC STRUCTURE OF II-IV-V ₂ COMPOUNDS. , 1975, , 79-109.		3

#	ARTICLE	IF	CITATIONS
37	Bonding and Antibonding Potentials in Group-IV Semiconductors. Physical Review Letters, 1975, 34, 1334-1337.	7.8	9
38	The electrical properties of GaAs _{1-x} P _x alloys from a high-pressure experiment. Journal of Physics C: Solid State Physics, 1975, 8, 1397-1344.	1.5	14
39	The Optical Properties, Electronic Structure, and Photoconductivity of Arsenic Chalcogenide Layer Crystals., 1976, , 231-272.		10
40	Electroreflectance spectra of thin silicon films. Thin Solid Films, 1976, 37, 201-206.	1.8	2
41	The optimum growth composition for GaAs _{1-x} P _x LEDs from a high pressure experiment. Solid-State Electronics, 1976, 19, 567-571.	1.4	0
42	Two-phonon Raman scattering in GaSb. Solid State Communications, 1976, 18, 1337-1340.	1.9	15
43	Pressure Dependence of Reflectivity of Se: Experimental Evidence for Large Local-Field Corrections. Physical Review Letters, 1976, 36, 740-744.	7.8	35
44	Symmetry analysis and uniaxial-stress effect on the low-field electroreflectance of Si from 3.0 to 4.0 eV. Physical Review B, 1976, 14, 1577-1592.	3.2	62
45	Extension of the Gordon-Kim overlap interaction to open shell systems. Journal of Chemical Physics, 1976, 65, 379-381.	3.0	13
46	Local-density self-consistent energy-band structure of cubic CdS. Physical Review B, 1978, 17, 4850-4863.	3.2	69
47	Piezoreflectance Study of E ₁ and E ₂ Transitions in Germanium from 107 to 326 K. Physica Status Solidi (B): Basic Research, 1980, 101, 85-93.	1.5	12
48	Hydrostatic-pressure dependence of the ideal-neutral-vacancy levels in GaAs. Physical Review B, 1980, 22, 2898-2902.	3.2	7
49	Effect of pressure on optical properties of crystalline As ₂ S ₃ . Physical Review B, 1980, 22, 3866-3876.	3.2	63
50	Deformation potentials of the fundamental exciton spectrum of InP. Physical Review B, 1980, 22, 2020-2024.	3.2	33
51	Effect of pressure on the electrical resistivity of amorphous silicon. Physical Review B, 1981, 24, 2282-2284.	3.2	5
52	Pressure dependence of pseudo-direct gaps in ZnSiP ₂ . Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 83, 446-448.	2.1	4
53	The Fundamental Absorption Edge of MgSiP ₂ . Physica Status Solidi (B): Basic Research, 1981, 106, 85-89.	1.5	7
54	Effect of high pressure on radiative recombination in hydrogenated amorphous silicon. Physical Review B, 1981, 23, 787-793.	3.2	32

#	ARTICLE		IF	CITATIONS
55	Photoelastic trends for amorphous and crystalline solids of differing network dimensionality. Physical Review B, 1981, 24, 4652-4665.		3.2	75
56	Temperature Dependence of the Band-Edge Effective Mass in n-InAs Deduced from Magnetophonon Resonance. Japanese Journal of Applied Physics, 1981, 20, 1265-1269.		1.5	23
58	Pressure-optical studies of GeS ₂ glasses and crystals: Implications for network topology. Physical Review B, 1982, 25, 781-792.		3.2	81
59	Pressure dependence of pseudodirect gaps in ZnGeP ₂ . Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 90, 97-100.		2.1	0
60	Wavelength Modulated Reflectivities of the Direct Exciton Edge in GaP. Journal of the Physical Society of Japan, 1983, 52, 1057-1063.		1.6	29
61	Pressure dependence of the E ₁ gap in GaSb: Resonant Raman technique. Solid State Communications, 1984, 50, 287-289.		1.9	8
62	Dependence of Raman frequencies and scattering intensities on pressure in GaSb, InAs, and InSb semiconductors. Physical Review B, 1984, 30, 681-687.		3.2	130
63	Temperature dependence of the dielectric function of germanium. Physical Review B, 1984, 30, 1979-1991.		3.2	716
64	Effect of high pressure on chalcogenide glasses. Bulletin of Materials Science, 1985, 7, 271-302.		1.7	49
65	Pressure dependence of energy gaps within local density functional formalism. Solid State Communications, 1985, 56, 575-579.		1.9	12
66	Pressure dependence of deep levels in GaP. Chinese Physics Letters, 1985, 2, 93-95.		3.3	2
67	Cryogenicâ€ pressure response of optical transitions in quantum well and bulk GaAs: A direct comparative study. Journal of Applied Physics, 1985, 58, 4662-4665.		2.5	14
68	High-magnetic-field and high-hydrostatic-pressure investigation of hydrogenic- and resonant-impurity states inn-type indium arsenide. Physical Review B, 1985, 31, 8013-8023.		3.2	14
69	Photoelastic trends from halides to pnictides by a bondâ€ orbital method. Journal of Applied Physics, 1986, 60, 1472-1478.		2.5	16
70	Band structure and optical properties of II-IV-V compounds. Soviet Physics Journal (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 182 Td			
71	Phase transitions in AlAs/GaAs superlattices under high pressure. Physical Review Letters, 1987, 58, 781-784.		7.8	44
72	Photoluminescence properties of modulation-doped multiple quantum wells under high pressure. Superlattices and Microstructures, 1987, 3, 273-275.		3.1	1
73	Calculated optical properties of semiconductors. Physical Review B, 1988, 37, 1167-1179.		3.2	129

#	ARTICLE	IF	CITATIONS
74	Model dielectric constants of Si and Ge. <i>Physical Review B</i> , 1988, 38, 12966-12976.	3.2	190
75	DX centers in III-V compound and alloy semiconductors as studied by hydrostatic pressure experiments. <i>Journal of Crystal Growth</i> , 1989, 98, 243-248.	1.5	25
76	Investigation of Ion Implanted Silicon by Electroreflectance Spectroscopy. <i>Physica Status Solidi A</i> , 1989, 112, 805-810.	1.7	0
77	Effects of wave-function delocalization on the optical properties of GaAs/AlAs short-period asymmetric superlattices. <i>Physical Review B</i> , 1990, 41, 7647-7652.	3.2	10
78	Electronic structure of GaAs/AlAs symmetric superlattices: A high-pressure study near the type-I-type-II crossover. <i>Physical Review B</i> , 1990, 41, 3641-3646.	3.2	42
79	Structural and electronic properties of narrow-band-gap semiconductors: InP, InAs, and InSb. <i>Physical Review B</i> , 1990, 41, 12079-12085.	3.2	101
80	Pressure dependence of the electronic properties of cubic III-V In compounds. <i>Physical Review B</i> , 1990, 41, 1598-1602.	3.2	77
81	Raman-scattering and optical studies of argon-etched GaAs surfaces. <i>Physical Review B</i> , 1991, 43, 9678-9686.	3.2	17
82	Photoluminescence in strained GaSb/InGaSb quantum wells by metalorganic chemical vapor deposition. <i>Journal of Applied Physics</i> , 1992, 71, 1368-1372.	2.5	15
83	High pressure optical investigation of porous silicon. <i>Applied Physics Letters</i> , 1992, 61, 1435-1437.	3.3	29
84	GaSb/InGaSb strained-layer quantum wells by MOCVD. <i>Solid-State Electronics</i> , 1992, 35, 1385-1390.	1.4	8
85	The influence of nanocrystals on the dielectric function of porous silicon. <i>Applied Surface Science</i> , 1993, 63, 57-61.	6.1	15
86	Characterisation of porous silicon layers by spectroscopic ellipsometry. <i>Journal of Luminescence</i> , 1993, 57, 205-209.	3.1	23
87	Hydrostatic pressure dependence of binding energies for donors in quantum well heterostructures. <i>Physica Scripta</i> , 1993, 48, 376-378.	2.5	102
88	Temperature dependence of the dielectric function and the interband critical-point parameters of GaP. <i>Physical Review B</i> , 1993, 48, 7915-7929.	3.2	79
89	Investigation of multilayer SOI structures by electroreflectance spectroscopy. <i>Materials Letters</i> , 1993, 18, 137-140.	2.6	0
90	Hydrostatic pressure effects on the optical transitions in the free-standing porous silicon film. <i>Applied Physics Letters</i> , 1993, 63, 346-348.	3.3	15
91	Pressure Dependence of the Band Gaps and Charge Densities in Si. <i>Physica Status Solidi (B): Basic Research</i> , 1994, 182, 109-117.	1.5	7

#	ARTICLE	IF	CITATIONS
92	Cyclotron FIR emission from hot electrons in GaAs-GaAlAs heterostructures. Solid-State Electronics, 1994, 37, 1213-1216.	1.4	2
93	Optical transitions in strained Si _{1-y} Ge _y layers on Si(001). Applied Physics Letters, 1994, 65, 3356-3358.	3.3	44
94	Cyclotron emission study of electron masses in GaAs-GaAlAs heterostructures. Semiconductor Science and Technology, 1994, 9, 320-328.	2.0	23
95	DC and large-signal time-dependent electron transport in heterostructure devices: an investigation of the heterostructure barrier varactor. IEEE Transactions on Electron Devices, 1995, 42, 1070-1080.	3.0	11
96	DC and large-signal time-dependent electron transport in heterostructure devices: an investigation of the heterostructure barrier varactor. IEEE Transactions on Electron Devices, 1995, 42, 1393-1403.	3.0	24
97	In situ laser reflectometry study of the morphology of Ge/GaAs layers during their heteroepitaxial growth. Journal of Applied Physics, 1995, 78, 5680-5685.	2.5	9
98	The λ -v Transition Energies of Al _x In _{1-x} P Alloys. Japanese Journal of Applied Physics, 1997, 36, 6607-6613.	1.5	7
99	Local-density-derived semiempirical nonlocal pseudopotentials for InP with applications to large quantum dots. Physical Review B, 1997, 55, 1642-1653.	3.2	107
100	Reflectance and photomodulated reflectance studies of an InGaAs/GaAs/AlGaAs vertical-cavity surface-emitting laser structure under hydrostatic pressure. Solid State Communications, 1998, 107, 97-100.	1.9	6
101	Chapter 4 Optical Properties of Semiconductors under Pressure. Semiconductors and Semimetals, 1998, 54, 247-425.	0.7	62
102	Chapter 1 High Pressure in Semiconductor Physics: A Historical Overview. Semiconductors and Semimetals, 1998, 54, 1-48.	0.7	7
103	Silicon interband transitions observed at Si(100)-SiO ₂ interfaces. Physical Review B, 1998, 58, R1734-R1737.	3.2	62
104	Piezo-optics of InP in the visible-ultraviolet range. Physical Review B, 1998, 57, 4432-4442.	3.2	9
105	Modelling and characteristics of photoelastic waveguides in Si _{1-x} Ge _x /Si heterostructures. IEE Proceedings: Optoelectronics, 2000, 147, 123-131.	0.8	12
106	Raman scattering of Ge/Si dot superlattices under hydrostatic pressure. Physical Review B, 2001, 64, .	3.2	21
107	Photoluminescence Study of Self-Limiting Oxidation in Nanocrystalline Silicon Quantum Dots. Materials Research Society Symposia Proceedings, 2001, 664, 2061.	0.1	19
108	Pressure-induced resonant Raman scattering in Ge/Si islands. Applied Physics Letters, 2002, 80, 2919-2921.	3.3	10
109	Indium arsenide (InAs), energy gap, exciton data. , 0, , 1-4.	0	0

#	ARTICLE	IF	CITATIONS
110	A plane-wave pseudopotential study on III V zinc-blende and wurtzite semiconductors under pressure. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 9579-9587.	1.8	109
111	Properties of Ge nanocrystals formed by implantation of Ge+ ions into SiO ₂ films with subsequent annealing under hydrostatic pressure. <i>Semiconductors</i> , 2003, 37, 462-467.	0.5	2
112	Effects of hydrostatic pressure on Raman scattering in Ge quantum dot superlattices. <i>Thin Solid Films</i> , 2003, 424, 23-27.	1.8	1
113	Optical transitions in Ge nanocrystals formed by high-pressure annealing of Ge+ ion implanted SiO ₂ films. <i>Solid State Communications</i> , 2004, 129, 63-68.	1.9	10
114	Raman scattering studies of Ge/Si islands under hydrostatic pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3274-3278.	1.5	2
115	Electronic and optical properties of zincblende AlN, GaN and InN compounds under pressure. <i>Physica Scripta</i> , 2007, 75, 414-418.	2.5	14
116	Optical studies of Si/SiO ₂ interfaces by second-harmonic generation spectroscopy of silicon interband transitions. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 87, 451-460.	2.3	28
117	Energy band structure of diamond, cubic silicon carbide, silicon, and germanium. <i>International Journal of Quantum Chemistry</i> , 1967, 1, 533-566.	2.0	26
118	Response of the potential of a gold electrode to elastic strain. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 9008.	2.8	34
119	Numerical simulation and modeling of GaAs quantum-well solar cells. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	35
120	Dynamic electro-chemo-mechanical analysis during cyclic voltammetry. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 17313.	2.8	38
121	Optical Properties of Semiconductors. , 2011, , 125-195.		3
122	Direct evidence for suppression of Auger recombination in GaInAsSbP/InAs mid-infrared light-emitting diodes. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	18
123	Pressure-induced resonance Raman effect of InAs \times P _{1-x} alloy films on InP. <i>Journal of the Korean Physical Society</i> , 2012, 61, 1573-1577.	0.7	0
124	E ₁ (A) Electronic Band Gap in Wurtzite InAs Nanowires Studied by Resonant Raman Scattering. <i>Nano Letters</i> , 2013, 13, 3011-3016.	9.1	32
125	Optimization of Optical Gain in In _x Ga _{1-x} Sb/GaSb Unstrained Quantum Well Structures. <i>Energy Procedia</i> , 2015, 74, 191-197.	1.8	4
126	Reduction of exciton mass by uniaxial stress in GaAs/AlGaAs quantum wells. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 1537-1544.	1.5	3
127	Electrical transport properties of single-crystal CaB ₆ , SrB ₆ , and BaB ₆ . <i>Physical Review B</i> , 2016, 94, .	3.2	11

#	ARTICLE	IF	CITATIONS
128	Disordered Semiconductors on Mechanically Flexible Substrates for Large-Area Electronics. Springer Handbooks, 2017, , 1-1.	0.6	0
129	Intrinsic coherent acoustic phonons in the indirect band gap semiconductors Si and GaP. Physical Review B, 2017, 95, .	3.2	26
130	High Pressure Properties of Some Laser Materials. , 1987, , 431-449.		1
132	Silicon. , 1971, , 36-55.		3
133	STRUCTURAL ISSUES IN AMORPHOUS CHALCOGENIDES. , 1986, , 325-333.		2
135	The first principle calculation of electronic and optical properties of AlN, GaN and InN compounds under hydrostatic pressure. Semiconductor Physics, Quantum Electronics and Optoelectronics, 2006, 9, 12-16.	1.0	5
136	Thickness and Strain Measurement of Native Oxide on Si Surface by Photo-reflectance Spectra.. Journal of the Japan Society for Precision Engineering, 1995, 61, 396-400.	0.1	1
137	Silicon on Mechanically Flexible Substrates for Large-Area Electronics. , 2006, , 1107-1119.		0
140	Indium Arsenide. , 1971, , 93-103.		0
141	Gallium-Arsenic-Antimony System. , 1972, , 15-18.		0
142	The influence of nanocrystals on the dielectric function of porous silicon. , 1993, , 57-61.		0
143	Heterostructure Field-Effect Transistors. , 1993, , 112-166.		0
144	Gallium phosphide (GaP), interband transition and splitting energies. , 0, , 1-10.		0
145	Gallium arsenide (GaAs), interband transition energies (critical point energies). , 0, , 1-20.		0
146	Gallium antimonide (GaSb), spin-orbit splitting energies. , 0, , 1-5.		0
147	Gallium antimonide (GaSb), higher band-band transitions (critical point energies). , 0, , 1-14.		0
148	Indium arsenide (InAs), higher band-band transitions. , 0, , 1-9.		0
149	Indium antimonide (InSb), broadening parameters at crit. points, press. and temperature coeff.. , 0, , 1-2.		0

#	ARTICLE	IF	CITATIONS
150	Silicon (Si), higher band-band transitions (critical point energies). , 0, , 1-10.		0
151	Germanium (Ge), higher band-band transitions (critical point energies). , 0, , 1-16.		0
152	Squeezing Germanium Nanostructures. , 2007, , 275-300.		0
153	Effect of diffusion on acoustic deformation potential characterization through coherent acoustic phonon dynamics. <i>Physical Review B</i> , 2022, 106, .	3.2	4
154	Metal transducer-assisted acoustic deformation potential characterization via coherent acoustic phonon dynamics. <i>Photoacoustics</i> , 2023, 30, 100489.	7.8	2