

BIBLIOGRAPHY

1. Abbood M A, Ali M M, and Emad K A, "Structural properties of $Zn_xBi_{2-x}Te_3$ alloys prepared by solid solution," *International Journal of Application or Innovation in Engineering & Management*, vol. 4, no. 1, p. 1, 2015.
2. Abdel-Aal A, Mansour B A H and Eissa H M, "Some physical properties of gamma irradiated $Ge_x(As_2Te_3)_{100-x}$ chalcogenide system," *Turkish Journal of Physics*, vol. 29, no. 4, p. 223, 2005.
3. Ahmed S A, "Preparation and thermoelectric power of $SnBi_4Se_7$," *Philosophical Magazine*, vol. 86, no. 9, p. 1227, 2006.
4. Arivuoli D, Gnanam F D and Ramasamy P, "Growth and microhardness studies of chalcogenides of arsenic, antimony and bismuth," *Journal of Materials Science Letters*, vol. 7, no. 7, p. 711, 1988.
5. Arshak K and Korostynska O, "Gamma radiation dosimetry using tellurium dioxide thin film structures," *Sensors*, vol. 2, no. 8, p. 347, 2002.
6. Baro A M and Reifenberger, "Atomic force microscopy in liquids: biological applications", 1st Edition., *Wiley-VCH Verlag GmbH & Co*, London, 2012.
7. Bahabri F S and Al-raddadi S W, "Study of the effect of irradiation on structural and electrical properties of (Bi_2Te_3) thin films," *Journal of American Science*, vol. 8, no. 2, p. 175, 2012.

8. Bang S, Kim B, Youn N, Kim Y K and Wee D, "Economic and environmental analysis of thermoelectric waste heat recovery in conventional vehicles operated in Korea: A model study," *Journal of Electronic Materials*, vol. 45, no. 3, p. 1956, 2016.
9. Baoxing C and Ctirad U, "Transport properties of Bi_2S_3 and the ternary bismuth sulfides $\text{KBi}_{6.33}\text{S}_{10}$ and $\text{K}_2\text{Bi}_8\text{S}_{13}$," *Chemistry of Materials*, vol. 9, no. 7, p. 1655, 1997.
10. Bathula S, Jayasimhadri M and Dhar A, "Mechanical properties and microstructure of spark plasma sintered nanostructured *p*-type SiGe thermoelectric alloys," *Materials and Design*, vol. 87, no. 1, p. 414, 2015.
11. Bedoya M O N, Hashibon A and Elasser C, "Influence of point defects on the phonon thermal conductivity and phonon density of states of Bi_2Te_3 ," *Physics Status Solidi A*, vol. 213, no. 3, p. 684, 2016.
12. Burstein E, "Anomalous optical absorption limit in InSb," *Physical Review*, vol. 93, no.3, p.632, 1954.
13. Bogner A, Jouneau P H, Thollet G, Basset D and Gauthier C, "A history of scanning electron microscopy developments: towards "wet-STEM imaging," *Micron*, vol. 38, no. 4, p. 390, 2007.
14. Brandt N B and Kulbachinskii V A, "Pressure spectroscopy impurity states and band structure of bismuth telluride," *Semiconductor Science and Technology*, vol. 7, no. 7, p. 907, 1992.
15. Capper P ed., "Bulk crystal growth of electronic, optical and optoelectronic materials", vol. 14, *John Wiley & Sons*, UK, 2005.
16. Champness C H, Chiang P T and Parekh P, "Thermoelectric properties of $\text{Bi}_2\text{Te}_3\text{-Sb}_2\text{Te}_3$ alloys," *Canadian Journal of Physics*, vol. 43, no. 4, p. 653, 1965.

17. Chandrasekharan K A and Kunjomana A G, "Growth and microindentation analysis of pure and doped Sb_2Se_3 crystals," *Turkish Journal of Physics*, vol. 33, no. 4, p. 209, 2009.
18. Chen Z C, Suzuki K, Miura S, Nishimura K and Ikeda K, "Microstructural features and deformation-induced lattice defects in hot-extruded Bi_2Te_3 thermoelectric compound," *Materials Science and Engineering: A*, vol. 500, no. 1 p. 70, 2009.
19. Chetty R, Bali A, Femi O E, Chattopadhyay K and Malick R C, "Thermoelectric properties of In-doped $\text{Cu}_2\text{ZnGeSe}_4$," *Journal of Electronic Materials*, vol. 45, no. 3, p. 1625, 2016.
20. Choi J, Choi S, Choi J, Park Y, Park H M, Lee H W, Woo B C and Cho S, "Magnetic properties of Mn-doped Bi_2Te_3 and Sb_2Te_3 ," *Physics Status Solidi B*, vol. 241, no. 7, p. 1541, 2004.
21. Cullity B D, "Elements of X-ray diffraction", *Prentice Hall, Inc.*, New Jersey, 2001.
22. Dutta P, Bhoi D, Midya A, Khan N, Mandal P, Samatham S S and Ganesan V, "Anomalous thermal expansion of Sb_2Te_3 topological insulator," *Applied Physics Letters*, vol. 100, no. 25, p. 251912, 2012.
23. Das D, Malik K, Deb A K, Kulbachinskii, Kytin V G, Chatterjee S, Dhara S, Bandyopadhyay S and Banerjee A, "Tuning of thermoelectric properties with changing Se content in Sb_2Te_3 ," *Europhysics Letters*, vol. 113, p. 47004, 2016.
24. David B W and Barry C C, "Transmission electron microscopy: A textbook for materials science", 2nd Edition., *Springer*, New York, 2009.
25. Dhar S N, and Desai C F, " Sb_2Te_3 and $\text{In}_{0.2}\text{Sb}_{1.8}\text{Te}_3$: A comparative study of thermoelectric and related properties," *Philosophical Magazine Letters*, vol. 82, no. 10, p. 581, 2002.

26. Dieter K S, "Semiconductor materials and device characterization", Wiley, New York, 1990.
27. Drasar C, Steinhart M, Lostak P, Shin H K, Jeffrey S D and Uher C "Transport coefficients of titanium-doped Sb_2Te_3 single crystals," *Journal of Solid State Chemistry*, vol. 178, no. 4, p. 1301, 2005.
28. Du Y, Cai K F, Shen S Z, An B, Qin Z and Casey P S, "Influence of sintering temperature on thermoelectric properties of Bi_2Te_3 /Polythiophene composite materials," *Journal of Materials Science: Materials in Electronics*, vol. 23, no. 4, p. 870, 2012.
29. Duan X and Jiang Y, "Annealing effects on the structural and electrical transport properties of n -type $\text{Bi}_2\text{Te}_{2.7}\text{Se}_{0.3}$ thin films deposited by flash evaporation," *Applied Surface Science*, vol. 256, no. 24, p. 7365, 2010
30. Dyck J S, Chen W, Hajek P, Lostak P and Uher C, "Low-temperature ferromagnetism and magnetic anisotropy in the novel diluted magnetic semiconductor $\text{Sb}_{2-x}\text{V}_x\text{Te}_3$," *Physica B: Condensed Matter*, vol. 312, p. 820, 2002.
31. Enrique M, "Thermoelectric materials: advances and applications", p. 148, *CRC press*, Boca Raton, 2015.
32. European food safety authority, "Scientific opinion on the chemical safety of irradiated food," *Efsa Journal*, vol. 9, no. 4, p. 1930, 2011.
33. Fan P, Zheng Z H, Liang G X, Zhang D P and Cai X M, "Thermoelectric characterization of ion beam sputtered Sb_2Te_3 thin films," *Journal of Alloys and Compounds*, vol. 505, no. 1, p. 278, 2010.
34. Fang B, Zeng Z, Yan X and Hu Z, "Effects of annealing on thermoelectric properties of Sb_2Te_3 thin films prepared by radio frequency magnetron sputtering," *Journal of Materials Science: Materials in Electronics*, vol. 24, no. 4, p. 1105, 2013.

35. Faktor M M and Garret I, "Growth of crystals from the vapour", *Chapman and Hall*, London, 1974.
36. Garrat A J and Bell D C, "Energy dispersive X-ray analysis in the electron microscope", *BIOS Scientific Publishers Ltd.*, Oxford, 2003.
37. George S D, Augustine S, Mathai E, Radhakrishnan P, Nampoori V P N and Vallabhan C P G, "Effect of Te doping on thermal diffusivity of Bi₂Se₃ crystals: A study using open cell photoacoustic technique," *Physics Status Solidi A*, vol. 196, no. 2, p. 384, 2003.
38. Gibson A F, Aigrain P, Burgess R E and Garrett C G B, "Progress in semiconductors," *Journal of the Electrochemical Society*, vol. 104, no. 6, p. 133C, 1957.
39. Gilman J J, "The Science of hardness testing and its research applications", *ASM*, Ohio, 1973.
40. Goncalves L M, Couto C, Alpuim P, Rowe D M and Correia J H, "Thermoelectric properties of Bi₂Te₃/Sb₂Te₃ thin films," *Materials Science Forum*, vol. 514, p. 156, 2006.
41. Gonçalves A P and Godart C, "New promising bulk thermoelectrics: intermetallics, pnictides and chalcogenides," *The European Physical Journal B*, vol. 87, no. 2, p. 1, 2014.
42. Hall E H, "On a new action of the magnet on electric currents," *American Journal of Mathematics*, vol. 2, no. 3, p. 287, 1879.
43. Hegde S S, Kunjomana A G, Chandrasekharan K A, Ramesh K and Prashantha M, "Optical and electrical properties of SnS semiconductor crystals grown by physical vapor deposition technique," *Physica B: Condensed Matter*, vol. 406, no. 5, p. 1143, 2011.
44. Heremans J and Hansen O P, "Influence of non-parabolicity on intravalley electron-phonon scattering; the case of bismuth," *Journal of Physics C*, vol. 12, no. 17, p. 3483, 1979.

45. Hinsche N F, Yu Yavorsky B, Mertig I and Zahn P, “Influence of strain on anisotropic thermoelectric transport in Bi_2Te_3 and Sb_2Te_3 ,” *Physical Review B*, vol. 84, no. 16, p. 165214, 2011.
46. Horak J, Lostak P, Drasar C, Jeffrey S D, Zengzua Z and Uher C, “Defect structure of $\text{Sb}_{2-x}\text{Mn}_x\text{Te}_3$ single crystals,” *Journal of Solid State Chemistry*, vol. 178, no. 9, p. 2907, 2005.
47. Horak J, Lostak P, Drasar C, Navratil J and Uher C, “Defect structure of $\text{Sb}_{2-x}\text{Fe}_x\text{Te}_3$ single crystals,” *Journal of Solid State Chemistry*, vol. 180, no. 3, p. 915, 2007.
48. Horak J, Sary Z, Lostak P and Pancir P, “Antisite defects in $\text{Sb}_{2-x}\text{In}_x\text{Te}_3$ mixed crystals,” *Journal of Physics and Chemistry of Solids*, vol. 49, no. 2, p. 191, 1988.
49. Horak J, Drasar C, Novotny R, Karamazov S and Lostak P, “Non-stoichiometry of the crystal lattice of antimony telluride,” *Physica Status Solidi A*, vol. 149, no. 2, p. 549, 1995.
50. Horak J, Karamazov S, Nesladek P and Lostak P, “Point defects in $\text{Sb}_2\text{Te}_{3-x}\text{Se}_x$ crystals,” *Journal of Solid State Chemistry*, vol. 129, no. 1, p. 92, 1997.
51. Horak J, Matyas M and Tichy L, “Lattice defects in manganese-doped Sb_2Te_3 crystals,” *Physica Status Solidi A*, vol. 27, no. 2, p. 621, 1975.
52. Hummel R E, “Electronic properties of materials”, *Springer*, New York, 2001.
53. Hwang J H, Joonbum P, Sangku K, Jun S K, and Jeong Y P, “Role of oxidation on surface conductance of the topological insulator $\text{Bi}_2\text{Te}_2\text{Se}$,” *Surface Science*, vol. 630, p. 153, 2014.
54. Hyun D B, Oh T S, Hwang J S and Shim J D, “Effect of excess Te addition on the thermoelectric properties of the 20% Bi_2Te_3 -80% Sb_2Te_3 single crystal and hot-pressed alloy,” *Scripta Materialia*, vol. 44, no. 3, p. 455, 2001.

55. Ibrahim M M, Wakkad M M, Shokr E K and Abd E G, “Electrical properties of antimony telluride,” *Applied Physics A*, vol. 52, no. 4, p. 237, 1991.
56. Ioffe A F, “Semiconductor thermoelements and thermoelectric cooling”, *Infosearch Limited*, London, 1957.
57. Ivanova L D, Petrova L I, Yu, Granatkina V and Zemskov V S, “Thermoelectric materials based on Sb_2Te_3 - Bi_2Te_3 solid solutions with optimal performance in the range 100-400,” *Inorganic Materials*, vol. 43, no. 9, p. 933, 2007.
58. James H M and Lark H K, “Localized electronic states in bombarded semiconductors,” *Zeitschrift für physikalische Chemie*, vol. 198, p. 107, 1951.
59. Jariwala B, and Shah D V, “Stacking fault in Bi_2Te_3 and Sb_2Te_3 single crystals,” *Journal of Crystal Growth*, vol. 318, no. 1, p. 711, 2011.
60. Jennifer G, Song Z, Tim H, Jiangying P, Jian H and Terry M T, “High-Temperature thermoelectric properties of $\text{Co}_4\text{Sb}_{12}$ -based skutterudites with multiple filler atoms: $\text{Ce}_{0.1}\text{In}_x\text{Yb}_y\text{Co}_4\text{Sb}_{12}$,” *Journal of Electronic Materials*, vol. 40, no. 5, p. 696, 2011.
61. Jiao W H, Jiang S, Feng C M, Xu Z A, Cao G H, Xu M, Feng F L, Yamada A, Matsubayashi K and Uwatoko Y, “Growth and characterization of Bi_2Se_3 crystals by chemical vapor transport,” *AIP Advances*, vol. 2, no. 2, p. 022148, 2012.
62. Joseph S P, Di Wu, Song Z, Wenjie X, Terry M T, Peter T and Rama V, “Half-Heusler phases and nanocomposites as emerging high-ZT thermoelectric materials,” *Journal of Material Research*, vol. 26, no. 22, p. 2795, 2011.
63. Jullian, “ Microscopy EKB Series”, *John Wiley & Sons Ltd.*, West Sussex, 2015.

64. Kokh K A, Atuchin V V, Gavrilova T A, Kuratieva N V, Pervukhina N V and Surovtsev N V, “Microstructural and vibrational properties of PVT grown Sb_2Te_3 crystals,” *Solid State Communications*, vol. 177, p. 16, 2014.
65. Krishna A, Vijayan N, Singh B, Thukral K and Maurya K K, “Crystalline perfection and mechanical investigations on vertical Bridgman grown bismuth telluride (Bi_2Te_3) single crystals for thermoelectric applications,” *Materials Science and Engineering: A*, vol. 657, p. 33, 2016.
66. Krivosheev A E, Ivanenko L I, Filonov A B, Shaposhnikov G, Behr G, Schumann J and Borisenko V E, “Thermoelectric efficiency of single crystal semiconducting ruthenium silicide,” *Fizika i Tekhnika Poluprovodnikov*, vol. 40, no. 1, p. 29, 2006.
67. Kulbachinskii V A, Dashevskii Z M, Inoue M, Sasaki M, Negishi H, Gao W X, Lostak P, Horak J and de Visser A, “Valence-band changes in $\text{Sb}_{2-x}\text{In}_x\text{Te}_3$ and $\text{Sb}_2\text{Te}_{3-y}\text{Se}_y$ by transport and Shubnikov-de Haas effect measurements,” *Physical Review-Series B*, vol. 52, no. 10, p. 915, 1995.
68. Kulbachinskii V A, Kaminskii A Y, Kindo K, Narumi Y, Suga K, Lostak P and Svanda P, “Ferromagnetism in new diluted magnetic semiconductor $\text{Bi}_{2-x}\text{Fe}_x\text{Te}_3$,” *Physica B: Condensed Matter*, vol. 311, no. 3, p. 292, 2002.
69. Kulbachinskii V A, Miura N, Nakagawa H, Drashar C and Lostak P, “Influence of Ti doping on galvanomagnetic properties and valence band energy spectrum of $\text{Sb}_{2-x}\text{Ti}_x\text{Te}_3$ single crystals,” *Journal of Physics: Condensed Matter*, vol. 11, no. 27, p. 5273, 1999.

70. Kunjomana A G and Chandrasekharan K A, "Microhardness studies of GaTe whiskers," *Crystal Research and Technology*, vol. 40, no. 8, p. 782, 2005.
71. Kunjomana A G and Chandrasekharan K A, "Dislocation and microindentation analysis of vapour grown $\text{Bi}_2\text{Te}_{3-x}\text{Se}_x$ whiskers," *Crystal Research and Technology*, vol. 43, no. 6, p. 594, 2008.
72. Kunjomana A G and Elizabeth M, "Growth and dislocation density of $\text{Te}_{1-x}\text{Se}_x$ whiskers," *Journal of Crystal Growth*, vol. 92, no. 3, p. 666, 1988.
73. Kunjomana A G and Elizabeth M, "Growth and morphology of hollow Bi_2Te_3 whiskers by physical vapour deposition method," *Crystal Research and Technology*, vol. 27, no. 3, p. 329, 1992.
74. Kunjomana A G, Chandrasekharan K A and Teena M, "Physical properties of vapour grown indium monotelluride platelets," *Journal of Crystal Growth*, vol. 411, p. 81, 2015.
75. Kunjomana A G, Teena M and Chandrasekharan K A, "Synthesis, growth mechanism and physical properties of vapour-deposited GaTe platelets," *Journal of Applied Crystallography*, vol. 47, no. 6, p. 1841, 2014.
76. Larson P and Mahanti S D, "Electronic structure and transport of Bi_2Te_3 and BaBiTe_3 ," *Physical Review B*, vol. 61, no. 12, p. 8162, 2000.
77. Larson P, "Effects of uniaxial and hydrostatic pressure on the valence band maximum in Sb_2Te_3 : An electronic structure study," *Physical Review B*, vol. 74, no. 20, p. 205113, 2006.
78. Leng Y, "Materials characterization introduction to microscopic and spectroscopic methods", *John Wiley and Sons Pvt. Ltd.*, Singapore, 2008.

79. Liou K M and Liao C N, "Electric current enhanced defect elimination in thermally annealed Bi-Sb-Te and Bi-Se-Te thermoelectric thin films," *Journal of Applied Physics*, vol. 108, no. 5, p. 053711, 2010.
80. Liua Y, Haijin L, Yong L and Wenbin S, "Effect of Sr substitution on electrical transport and thermoelectric properties of $Y_{1-x}Sr_xCoO_3$ ($0 \leq x \leq 0.2$) prepared by sol-gel process," *Ceramic International*, vol. 39, no. 7, p. 8189, 2013.
81. Lostak P, Drasar C, Horak J, Zhou Z, Jeffrey S D and Uher C, "Transport coefficients and defect structure of $Sb_{2-x}Ag_xTe_3$ single crystals," *Journal of Physics and Chemistry of Solids*, vol. 67, no. 7, p. 1457, 2006.
82. Lostak P, Drasar C, Krejcova A, Benes L, Dyck J S, Chen W and Uher C, "Preparation and some physical properties of tetradymite-type Sb_2Te_3 single crystals doped with CdS," *Journal of Crystal Growth*, vol. 222, no. 3, p. 565, 2001.
83. Lostak P, Drasar C, Navratil J and Benes L, " Sb_2Te_3 single crystals doped with chromium atoms," *Crystal Research and Technology*, vol. 31, no. 4, p. 403, 1996.
84. Lostak P, Novotny R, Krouti J and Stary Z, "Optical properties of $Sb_{2-x}In_xTe_3$ single crystals," *Physica Status Solidi A. Applied Research*, vol. 104, no. 2, p. 841, 1987.
85. Lostak P, Klichova I, Svanda P and Sramkova J, "Characterization of Ag-doped $Bi_{1.5}Sb_{0.5}Te_3$ single crystals," *Crystal Research Technology*, vol. 34, no. 8, no. 2, p. 995, 1999.
86. Masaki F, Ken K, Hiroaki M and Shinsuke Y, "Thermoelectric properties of Ag_8GeTe_6 ," *Journal of Alloys and Compounds*, vol. 396, no. 1-2, p. 280, 2005.
87. Masaki F, Ken K, Hiroaki M and Shinsuke Y, "Thermoelectric properties of α and β - Ag_2Te ," *Journal of Alloys and Compounds*,

- vol. 393, no. 1-2, p. 299, 2004.
88. Mattox, Donald M, “Handbook of physical vapor deposition (PVD) processing”, 2nd Edition., *William Andrew*, UK, 2010.
 89. Mehta Rutvik J, Yanliang Z, Hong Z, David S P, Matthew B, David J S, Ramamurthy R, Theodorian B T and Ganpati R, “Seebeck and figure of merit enhancement in nanostructured antimony telluride by antisite defect suppression through sulfur doping,” *Nano Letters*, vol. 12, no. 9, p. 4523, 2012.
 90. Minnich A, Dresselhaus M S, Ren Z F and Chen G, “Bulk nanostructured thermoelectric materials: current research and prospects,” *Energy & Environmental Science*, vol. 2, no. 5, p. 466, 2009.
 91. Mott B W, “Microindentation hardness testing”, *Butterworth Scientific Publications*, London, 1956.
 92. Moss T S, “The interpretation of the properties of indium antimonide,” *Proceedings of the Physical Society. Section B*, vol. 67, no. 10, p. 775, 1954.
 93. Naim D, Muhammed E, Fikret G, Aziz S, Klaus K, Halil K and Emin N O, “Performance of novel thermoelectric cooling module depending on geometrical factors,” *Journal of Electronic Materials*, vol. 44, no. 6, p. 1566, 2015.
 94. Nascimento V B, de Carvalho V E, Paniago R E A, Soares, Ladeira L O and Pfannes H D, “XPS and EELS study of the bismuth selenide,” *Journal of Electron Spectroscopy and Related Phenomena*, vol. 104, no. 1, p. 99, 1999.
 95. Nassary M M, Shaban H T, and El-Sadek M S, “Semiconductor parameters of Bi₂Te₃ single crystal,” *Materials Chemistry and Physics*, vol. 113, no. 1, p. 385, 2009.

96. Navratil J, Klichova I, Karamazov S, Sramkova J and Horak J, "Behavior of Ag admixtures in Sb_2Te_3 and Bi_2Te_3 single crystals," *Journal of Solid State Chemistry*, vol. 140, no. 1, p. 29, 1988.
97. Nick P, Blake, Susan L and Daniel B J, "Band structures and thermoelectric properties of the clathrates $\text{Ba}_8\text{Ga}_{16}\text{Ge}_{30}$, $\text{Sr}_8\text{Ga}_{16}\text{Ge}_{30}$, $\text{Ba}_8\text{Ga}_{16}\text{Si}_{30}$, and $\text{Ba}_8\text{In}_{16}\text{Sn}_{30}$," *Journal of Chemical Physics*, vol. 115, no. 17, p. 8060, 2001.
98. Nisson D M, Dioguardi A P, Klavins P, Lin C H, Shirer K, Shockley A C, Crocker J and Curro N J, "Nuclear magnetic resonance as a probe of electronic states of Bi_2Se_3 ," *Physical Review B*, vol. 87, no. 19, p. 195202, 2013.
99. Nolas G S, Sharp J and Goldsmid J, "Thermoelectrics: basic principles and new materials developments", *Springer*, New York, 2001.
100. Onitsch E M, "Systematic metallographic and mineralogic structures," *Mikroskopie*, vol. 5, no. 3, p. 94, 1950.
101. Pamplin B R, "Crystal growth", *Pergamon Press*, Oxford, New York, 2011.
102. Parker W J, Jenkins R J, Butler C P and Abbot G L, "Flash method of determining thermal diffusivity, heat capacity and thermal conductivity," *Journal of Applied Physics*, vol. 32, no. 9, p. 1679, 1961.
103. Popovic R S, "Hall effect devices", *CRC Press*, Boca Raton, 2003.
104. Pradyumnan P P and Swathikrishnan P P, "Thermoelectric properties of Bi_2Te_3 and its bilayer thin films," *Indian Journal of Pure and Applied Physics*, vol. 48, p. 115, 2010.
105. Ramesh M, Jae-Yong J S, Chul U and Il-Ho K, "Thermoelectric properties of $\text{In}_z\text{Co}_4\text{Sb}_{12}$ Skutterudites," *Metals and Materials International*, vol. 14, no. 2, p. 223, 2008.

106. Reshmi P M, Kunjomana A G, Chandrasekharan K A and Teena M, “Vapour growth and characterization of beta indium sesquitelluride crystals,” *Journal of Crystal Growth*, vol. 394, p. 1, 2015.
107. Rosenberg A J and Strauss A J, “Solid solutions of In_2Te_3 in Sb_2Te_3 and Bi_2Te_3 ,” *Journal of Physics and Chemistry of Solids*, vol. 19, no. 1-2 p. 105, 1961.
108. Rowe M, “Thermoelectrics hand mook macro to nano”, *CRC Press*, Baco Raton, 2006.
109. Sangwal K, “Etching of crystals, theory, experiment and application”, *Elsevier*, New York, 1987.
110. Saraswati V, “Microhardness measurement in nonmetallic materials,” *Bulletin of Materials Science*, vol. 9, no. 4, p. 287, 1987.
111. Sayer M and Mansingh A, “Measurement, instrumentation and experiment design in physics and engineering”, *Prentice-Hall Pvt Ltd.*, New Delhi, 2000.
112. Shaughnessy S M, Deasy M J, Kinsella C E, Doyle J V and Robinson A J, “Small scale electricity generation from a portable biomass cookstove: Prototype design and preliminary results,” *Applied Energy*, vol. 102, no. C, p. 374, 2012.
113. Scheel H J, Capper P and Rudolph P, “Crystal Growth Technology: semiconductors and dielectrics”, *John Wiley & Sons*, 2011.
114. Scheel H J, and Fukuda T, “*Crystal Growth Technology*”, *Wiley*, Chichester, 2003.
115. Shelimova L E, Karpinskii O G, Kretova M A, Kosyakov V I, Shestakov V A, Zemskov V S and Kuznetsov F A, “Homologous series of layered tetradymite-like compounds in the Sb-Te and GeTe- Sb_2Te_3 systems,” *Inorganic Materials*, vol. 36, no. 8, p. 768, 2000.

116. Siddhartha P, Jakob K, Andrew P, and Nina O, “Mechanical behavior and electrical conductivity of $\text{La}_{1-x}\text{Ca}_x\text{CoO}_3$ ($x = 0, 0.2, 0.4, 0.55$) perovskites,” *Journal of Power Sources*, vol. 195, no. 11, p. 3612, 2010.
117. Skalicky P and Wolfgang E, “Dislocation loops in antimony telluride,” *Physica Status Solidi A*, vol. 8, no. 2, p. 463, 1971.
118. Smith M J, Knight R J and Spencer C W, “Properties of $\text{Bi}_2\text{Te}_3\text{-Sb}_2\text{Te}_3$ alloys,” *Journal of Applied Physics*, vol. 33, no. 7, p. 2186, 1962.
119. Sommer I, “Crystal growth of Sb_2Te_3 by chemical transport,” *Journal of Crystal Growth*, vol. 12, no. 3, p. 259, 1972.
120. Soni P H, Bhavsar S R, Desai C F and Pandya G R, “Growth and characterization of $\text{In}_x\text{Bi}_{2-x}\text{Te}_3$ single crystals,” *Journal of Crystal Growth*, vol. 340 no. 1, p. 98, 2012.
121. Soni A, Yanyuan Z, Ligen Y, Aik M K K, Dresselhaus M S and Xiong Q, “Enhanced thermoelectric properties of solution grown $\text{Bi}_2\text{Te}_{3-x}\text{Se}_x$ Nanoplatelet Composites,” *Nano Letters*, vol. 12, no. 3, p. 1203, 2012.
122. Stary Z, Horak J, Stordeur M and Stolzer M, Antisite defects in $\text{Sb}_{2x}\text{Bi}_x\text{Te}_3$ mixed crystals,” *Journal of Physics and Chemistry of Solids*, vol. 49, no. 1, p. 29, 1988.
123. Svechnikova T E, Konstantinov P P and Alekseeva G T, “Physical properties of $\text{Bi}_2\text{Te}_{2.85}\text{Se}_{0.15}$ single crystals doped with Cu, Cd, In, Ge, S, or Se,” *Inorganic Materials*, vol. 36, no. 6, p. 556, 2000.
124. Svechnikova T E, Nikhezina I Y and Polikarpova N V, “Properties of Bi_2Te_3 crystals doped with Sn,” *Inorganic Material*, vol. 36, no. 8, p. 765, 2000.

125. Takashiri M, Shirakawa T, Miyazaki K and Tsukamoto H, “Fabrication and characterization of $\text{Bi}_{0.4}\text{Te}_{3.0}\text{Sb}_{1.6}$ thin films by flash evaporation method,” *Journal of Alloys and Compounds*, vol. 441, no. 1, p. 246, 2007.
126. Tanaka T, Shimada T and Sukegawa T, “In-situ radioactivity measurement for the site release after decommissioning of nuclear power plants,” *Progress in Nuclear Science and Technology*, vol. 4, p. 832, 2014.
127. Tauc J, Grigorovici R and Vancu A, “Optical properties and electronic structure of amorphous germanium,” *Physics Status Solidi B*, vol. 15, no. 2, p. 627, 1966.
128. Thonhauser T, Jeon G S, Mahan G D and Sofo J O, “Stress-induced defects in Sb_2Te_3 ,” *Physical Review B*, vol. 68, no. 20, p. 205207, 2003.
129. Thonhauser T, “Influence of negative pressure on thermoelectric properties of Sb_2Te_3 ,” *Solid State Communications*, vol. 129, no. 4, p. 249, 2004.
130. Udayashankar N K and Bhat H L, “Growth and characterization of indium antimonide and gallium antimonide crystals,” *Bulletin of Materials Science*, vol. 24, no. 5, p. 445, 2001.
131. Urazhdin S, Bilc D, Mahanti S D and Tessmer S H, “Surface effects in layered semiconductors Bi_2Se_3 and Bi_2Te_3 ,” *Physics Review B*, vol. 69, no. 8, p. 085313, 2004.
132. van der Pauw L J, “A method of measuring specific resistivity and Hall effect of discs of arbitrary shape,” *Philips Research Reports*, vol. 13, p.1, 1958.
133. Woollam J A, Beale H and Spain I L, “Mobility in single crystal Bi_2Se_3 ,” *Physics Letters A*, vol. 41, no. 4, p. 319, 1972.

134. Xue D, Liu and Yong H P, "Structure and transport properties of the $(\text{Bi}_{1-x}\text{Sb}_x)_2\text{Te}_3$ thermoelectric materials prepared by mechanical alloying and pulse discharge sintering," *Materials Transactions*, vol. 43, no. 4, p. 681, 2002.
135. Yacobi B G, "Semiconductor materials: An introduction to basic principles", *Plenum Publisher*, New York, 2003.
136. Yamashita O and Tomiyoshi, "Effect of annealing on thermoelectric properties of bismuth telluride compounds," *Japanese Journal of Applied Physics*, vol. 42, no. 2A, p. 492, 2003.
137. Yas R M, "Gamma radiation induced changes in the optical properties of CdTe thin films for dosimetric purposes," *Iraqi Journal of Physics*, vol. 10, no. 17, p. 71, 2012.
138. Yavorsky B, Yu, Hinsche N F, Mertig I and Zahn P, "Electronic structure and transport anisotropy of Bi_2Te_3 and Sb_2Te_3 ," *Physical Review B*, vol. 84, no. 16, p. 165208, 2011.
139. Yuan J, Zhao M, Yu W, Lu Y, Chen C, Xu M, Li S and Loh K P, "Raman spectroscopy of two-dimensional $\text{Bi}_2\text{Te}_x\text{Se}_{3-x}$ platelets produced by solvothermal Method," *Materials*, vol. 8, no. 8, p. 5007, 2015.
140. Zhao L D, Zhang B P, Liu W S, Zhang H L and Li J F, "Effects of annealing on electrical properties of n-type Bi_2Te_3 fabricated by mechanical alloying and spark plasma sintering," *Journal of Alloys and Compounds*, vol. 467, no. 1 p. 1, 2009.
141. Zhu P, Imai Y, Isoda Y, Shinohara Y, Jia X and Zou G, "Carrier-concentration-dependent transport and thermoelectric properties of PbTe doped with Sb_2Te_3 ," *Materials Transactions*, vol. 46, no. 12, p. 2690, 2005.

142. Zhang L, Xiao P, Shi L, Henkelman G, Goodenough J B and Zhou J, “Suppressing the bipolar contribution to the thermoelectric properties of $\text{Mg}_2\text{Si}_{0.4}\text{Sn}_{0.6}$ by Ge substitution,” *Journal of Applied Physics*, vol. 117, no. 15, p. 155103, 2015.