

## REFERENCES

1. Aleksandar,R & John,M 2011, Electrochemical reaction. Available from: <https://www.britannica.com/science/electrochemicalreaction/Complex-electrochemical-reactions> \_[15 December 2011].
2. Ambujam, K, Selvakumar, S, Prem Anand, D, Mohamed, G, & Sagayaraj, P 2006 'Crystal growth, optical, mechanical and electrical properties of organic NLO material  $\gamma$ -glycine', Cryst. Res. Tech., vol. 41, pp.671-677 .
3. Anandhi,S, Rajalakshmi,M, Shyju,TS, Gopalakrishnan,R 2011, 'Growth and characterization of an adduct 4-aminobenzoic acid with nicotinic acid', Journal of Crystal Growth, vol.318, pp.774 – 779.
4. Antsyshkina AS, Sadikov GG, Kuvshinova TB, Skorikov VM & Sergienko VS 2006, 'Synthesis and crystal structure of  $\text{KBi}(\text{C}_6\text{H}_4\text{O}_7) \cdot 3.5\text{H}_2\text{O}$ ', Russian Journal of Inorganic Chemistry,vol.51, no. 3, pp. 374-385.
5. Arjun Kalra, Mingtao Zhang, Sean Parkin & Tonglei Li 2017, 'Crystal packing and crystallization tendency from the melt of 2-((2-ethylphenyl)amino) nicotinic acid', Z. Kristallogr., aop.,vol.233, pp.9-16.
6. Arora, SK, Kothari, A, Amin, B, & Chudasama B 2007, 'Synthesis and characterization of cadmium tartarate single crystals', Cryst. Res. Tech., vol. 42, pp.589-594.
7. Arora, SK, Vipul Patel, Bhupendra Chudasama & Brijesh Amin 2005 'Single crystal growth and characterization of Strontium tartarate', Journal of Crystal Growth, vol. 275, pp. 657-661.

8. Arun, KJ 2009, Investigations on the growth and characterisation of some technologically important single crystals for possible nonlinear optical applications. Ph.D. thesis, Cochin University of Science And Technology.
9. Ascheron, C, Haase, C, Kuhn, G & Neumann, H 1989, 'Microhardness of Sn-doped InP.', *Cryst. Res. and Technol.*, vol.24, no.2, K33-K35 .
10. Ashby, NA 1951, 'The factor of hardness in metals', *New Zealand Engineering.J.Nucl. Engg.*, vol.61, pp. 33-34.
11. Aygun Z 2013, 'AFM and SEM Studies of VO<sup>2+</sup> Doped Potassium Dihydrogen Citrate Single Crystal Obtained by Slow Evaporation Method', *J.Chem cryst.*, vol. 43, pp. 103-107.
12. Aygun Z 2013, 'Variable temperature EPR studies of Cu<sup>2+</sup> and VO<sup>2+</sup> doped potassium dihydrogen citrate (C<sub>6</sub>H<sub>7</sub>KO<sub>7</sub>)', *Spectrochimica Acta.*, vol. 104, pp. 130-133.
13. Bajpai, R, & Datt, SC 1986, 'Effect of load on microhrdness of polycarbonate', *Indian J. Pure Appl. Phys.* ,vol.24, pp. 254 - 255.
14. Barrat, CS & Massalski, TB 1966, *Structure of Matals: Crystallographic methods, principles and data*, 3<sup>rd</sup> ed., McGraw-Hills, New York.
15. Basu, B, Mukhopadhyay, NK & Manisha 2009, 'Understanding the mechanical properties of hot pressed Ba-doped S-phase SiAlON ceramics, *J. Eur. Ceram. Soc.* ,vol.29, pp. 801-811.
16. Bauer, M, Harris, RK, Rao, RC, Apperley, DC, Rodger, CA 1998, 'NMR study of desmotropy in Irbesartan, a tetrazole containing pharmaceutical compound' *J. Chem. Soc. Perkin Trans.*, vol.1, no.2, pp.475.
17. Bellamy L 1958, *The Infrared Spectra of Complex Molecules*, 2<sup>nd</sup> ed., John Wiley & Sons, New York.

18. Beny, C, West, W, Moser, FH & Gilman, JJ(ed.) 1963, *The Art and Science of Growing Crystals*, Wiley, New York.
19. Bhatt, PM, Desiraju, GR 2007, 'Tautomeric polymorphism in omeprazole', *Chem. Commun.*, vol.20, pp. 2057-2059.
20. Bialonska, A & Ciunik, Z 2006, 'Hydrophobic 'lock and key' recognition of N-4-nitrobenzoylamino acid by strychnine', *Acta Cryst B*, vol.62, pp.1061–1070.
21. Bierlein, John D, & Herman Vanherzeele 1989, 'Potassium titanyl phosphate: properties and new applications', *JOSA B* 6, no. 4, pp. 622-633.
22. Blake, AJ, Lin, X, Schroder, M, Wilson, C, Yuan, RX 2004, *Acta Crystallogr. Sect. C*, vol.60, pp. O226-O228.
23. Bloembergen, N 1996, *Nonlinear Optics*, World Scientific series, vol.16, Singapore .
24. Bocskei, Z, Rao, R, Rodger, CA 1998, Irbesartan Crystal Form B. *Acta Crystallogr. Sect. C*, vol.54, no.6, pp.808-810.
25. Boomadevi, S, Mittal, HP & Dhasekaran, R 2004, 'Synthesis, crystal growth and characterization of 3-methyl 4nitropyridine 1-oxide (POM) single crystals', *Journal of Crystal Growth*, vol. 261, no. 1, pp. 55–62.
26. Bravais, A 1866, *In Etudes Cristallographiques*, Gauthier Villars, Paris.
27. Brian, R & Pamplin (ed.) 1980, *Crystal Growth: International Series on the Science of the Solid State*, William Clowes (Beccles) Limited, Beccles, London.
28. Briand GG & Burford N 1999, 'Bismuth Compounds and Preparations with Biological or Medicinal Relevance', *Chem. Rev.*, vol. 99, no.9, pp. 2601-2657.

29. Brice, JC 1973, *The Growth of Crystals from Liquids*, North Holland Publishing Company, Amsterdam.
30. Brice, JC 1986, *Crystal Growth Processes*, Halsted Press, John Wiley and sons, New York.
31. Bridgman, PW 1925, 'Various physical properties of rubidium and caesium and the resistance of potassium under pressures', *Proc. Amer. Acad. Arts and Sciences*, vol.60,pp.305.
32. Buckley, HE 1951, *Crystal Growth*, John Wiley and Sons,Svo.pp.xv, 571, Inc. New York.
33. Burns,DM, & Iball,J 1954,'Unit cells and space groups of citric acid and some potassium and sodium citrates', *Acta Cryst.* , vol.7, pp. 137.
34. Butcher, PN & Cotter, D 1990, *The elements of nonlinear optics*, Cambridge University Press, Cambridge.
35. Carruthers, JR 1975, *Crystal Growth from the Melt*, Bell Laboratories, Murray Hill, New Jersey, TSSC, vol.5, pp.326.
36. Chemla, DS & Zyss,J (ed) 1987, 'Nonlinear optical properties of organic molecules and crystals', vols. 1 & 2, Academic Press, New York.
37. Chen, HJ 2003, 'Polymeric hexa- $\mu$ -nicotinato-tricadmium (II) tetrahydrate', *Acta Crystallogr., Sect. C*, vol. 59, pp.m371-m372.
38. Chernov AA 1989, 'Formation of crystals in solutions', *Contemp. Phys.*, vol. 30, pp. 251-276.
39. Chernov, AA 1984, 'Modern Crystallography III-Crystal Growth Springer Verlag, Solid State Series, Berlin.
40. Chierotti, MR, Ferrero, L, Garino, N, Gobetto, R.,Pellegrino, L, Braga, D, Grepioni, F, Maini, L 2010, 'The Richest Collection of Tautomeric

- Polymorphs: The Case of 2-Thiobarbituric Acid. ', Chem. Eur. J., vol.16, pp. 4347-4358.
41. Chierotti, MR, Gobetto, R, Pellegrino, L, Milone, L, Venturello, P 2008, 'Mechanically Induced Phase Change in Barbituric Acid', Crystal Growth & Design, vol.8,no.5, pp.1454 – 1457.
  42. Clegg, W, Cressy, JT, McCamley, A & Straughan, BP 1995, 'The polymeric structure of aqua cadmium bis nicotinate', Acta Crystallogr., Sect. A, vol. 51, pp. 234-235.
  43. Coe, BJ, Foxon, SP, Helliwell, M, Rusanova, D, Brunshwig, BS, Clays, K, Depotter, G, Nyk, M, Samoc, M, Wawrzynczyk, D, et al. 2013, 'Heptametallic, octupolar nonlinear optical chromophores with six ferrocenyl substituents', Chem. Eur. J., vol. 19, pp.6613–6629.
  44. Constantinidis, G & Tomlinson, RD 1988, 'Microhardness of CuInSe<sub>2</sub>', Philos. Mag. Lett., vol. 57, no.2, pp. 91-97.
  45. Crasta, V Ravindrachary, V, Lakshmi, S, Pramod, S Shridar, M, & Prasad, JS 2005, 'Growth, characterization and crystal structure analysis of 1-(4-chlorophenyl)-3-(4-chlorophenyl)-2propen-1-one', Journal of Crystal Growth, vol.275, pp.329-335.
  46. Craxton, R, Stephen, Stephen D, Jacobs, J, Rizzo, & Robert Boni 1981, 'Basic properties of KDP related to the frequency conversion of 1 μm laser radiatio', IEEE Journal of Quantum Electronics, vol,17, no. 9, pp.1782-1786.
  47. Czochralski, J 1918, 'A new method for the measurement of crystallization rate of metals', Z. Physik. Chem., vol.92, pp.219-221.

48. Dalton, LR, Günter, P, Jazbinsek, M, Kwon, OP & Sullivan, PA 2015, *Organic Electro-Optics and Photonics: Molecules, Polymers and Crystals*, Cambridge University Press: Cambridge, UK,
49. Dalton, LR, Sullivan, PA & Bale, DH 2010, 'Electric Field Poled Organic Electro-optic Materials', *State of the Art and Future Prospects. Chem. Rev.*, vol. 110, pp.25–55.
50. Dash, WC 1959, 'Growth of Silicon Crystals Free from Dislocations', *J. Appl. Phys.*, vol.30, no.4, pp. 459-474.
51. De Yoreo, James, J, & Peter, G, Vekilov 2003, 'Principles of crystal nucleation and growth', *Reviews in Mineralogy and Geochemistry*, vol.54, no.1, pp. 57-93.
52. Deepa, B, & Philominathan, P 2016, 'Enhanced NLO and antibacterial properties of nicotinic acid-doped KDP crystals: synthesis, growth and characterisation', *Materials Research Innovations*, vol.21, no.2, pp.86-90.
53. Deepthy & Bhat, HL 2001, 'Growth and characterization of ferroelectric glycine phosphite single crystals', *J. Cryst. Growth*, vol. 226, pp. 287–293.
54. Delden, RA, Gelder, MB, Huck, NPM, et al. 2003, 'Controlling the color of cholesteric liquid-crystalline films by photoirradiation of a chiroptical molecular switch used as dopant', *Adv Funct Mater.*, vol.13, no.4, pp.319–324.
55. Desiraju, GRJ 1983, *Chem. Soc. Perkin Trans.* vol .2, pp. 1025.
56. Dhanaraj, PV, Rajesh, NP 2011, 'Investigations on crystal growth, structural, optical, dielectric, mechanical and thermal properties of a novel optical crystal: Nicotinium nitrate monohydrate', *Journal of Crystal Growth*, vol. 318, no.1, pp. 974–978.

57. Di, Y, Gao, W, Yang, W, Kong, Y & Tan, Z 2008, 'Synthesis, characterization and thermodynamic study of the co-ordination compound Cd (HNic) 2Cl<sub>2</sub>(s)', *J. Chem. Eng. Data*, vol. 53, no.7, pp. 1602-1606.
58. Donnay, JDH, & Harker, D 1937, 'A new law of crystal morphology extending the law of Bravais' *Am. Mineral*, vol.22, pp.446-467.
59. Eckardt, Robert, C, Hisashi Masuda, Yuan Xuan Fan, & Robert L. Byer 1990, 'Absolute and relative nonlinear optical coefficients of KDP, KD\*P, BaB<sub>2</sub>O<sub>4</sub>, LiIO<sub>3</sub>, MgO: LiNbO<sub>3</sub>, and KTP measured by phase-matched second harmonic generation', *Quantum Electronics, IEEE Journal of* 26, no. 5, pp.922-933.
60. Elwell, D & Scheel, HJ 1975, 'Crystal Growth for High Temperature Solutions', Academic Press Inc., New York.
61. Ezhil Vizhi, R, Rajan Babu, D & Sathiyarayanan, K 2010, 'Study of Microhardness and Its Related Physical Constants of Ferroelectric Glycine Phosphite (GPI) Single Crystals', *Ferroelectr. Lett*, vol. 37, pp. 23-29.
62. Faktor, MM, & Garrett, I 1974, *Growth of Crystals from Vapour*, Chapman and Hall, London.
63. Firdous Anwar 1998, *The assessment of urea related compounds as nonlinear optical materials and the single crystal growth of urea and NN' dimethyl urea*. Ph.D thesis, Dept. of Pure and Applied Chemistry, University of Strathclyde, U.K.
64. Fisher, RA (ed.) 1983, *Optical Phase Conjugation*, Academic press, New York.
65. Franken, PA, Hill, AE, Peters, CW & Weinreich, G 1961, 'Generation of Optical Harmonics', *Phys.Rev.Lett.*, vol.7, no.4, pp.118-119.
66. Friedel, G 1907, 'Studies on the law of Bravais', *Bull. Soc. Fr. Mineral*, vol.22, pp.326-455.

67. Fujisawa, I, Takeuchi,D, Kitamura,Y, Okamoto, R & Aoki,K 2012,' Crystal Structure of an L-Carnitine Complex with Pyrogallo[4]arene', Journal of Physics: Conference Series, vol.352, pp. 012043.
68. Furukawa, Y, Sato, M, Nitanda, F and Ito, K 1990, 'Growth and characterization of MgO-doped LiNbO<sub>3</sub> for electro-optic devices', J. Cryst. Growth, vol.99, pp. 832-836.
69. Garcia, MA, Lopez, C, Chlaramunt, RM, Kenz, A, Pierrot, M 2002, Helv. Chim. Acta , vol.85, pp. 2763.
70. Gharibahadian,E, Tafreshi,MJ & Fazli,M 2009, 'Growth of KTiOPO<sub>4</sub> crystals by flux technique and their characterization', Indian Journal of Pure & Applied Physics, vol.47, pp.356-361.
71. Gilman, JJ(ed.) 1963, 'The Art and Science of Growing Crystals', Science, vol.143, no.3607, pp.672-673, Wiley, New York.
72. Glusker, JP 1980, 'Citrate conformation and chelation: enzymatic implications', Accounts of Chemical Research, vol.13, pp.345-352.
73. Gong, J, Miao, H, Zhao, Z & Guan, Z 2001, 'Load-dependence of the measured hardness of Ti(C,N)-based cermets', Mater. Sci. Eng. A, vol. 303,pp. 179-186.
74. Graaf, DD, Braciszewicz, M, Hintzen, HT, Sopicka-Lizer, M & De With, G 2004, 'The Influence of The Composition on (The Load-Dependence of) The Microhardness of Y-;Si-;Al-;O-;N Glasses As Measured By Vickers Indentation', J. Mater. Sci., vol.39, pp. 2145.
75. Güder, HS, Şahin,E, Şahin,O, Göçmez, H, Duran,C & Ali Çetinkara,H 2011,' Vickers and Knoop Indentation Microhardness Study of β-SiAlON Ceramic', Acta Physica Polonica A, vol.120, no.6, PP.1026-1033, John Wiley,



New York.

76. Haja Hameed, AS, Rohani, S, Yu WC, Tai, CY, & Lan, CW 2006, 'Surface defects and mechanical hardness of rapidly grown DAST crystals', *J. Cryst. Growth*, vol. 297, pp. 146-15.
77. Hartman, P 1973, *Crystal Growth: An Introduction*, 2nd ed., North Holland Publishing company, Amsterdam, Elsevier, New York.
78. Hatschek, E, & Simon, AI 1912, 'The crystal growth in gel', *Colloid and Polymer Science*, vol. 10, pp. 265.
79. Hatton, BT, Landskron, K, Hunks, WJ, Benett, MR, Shukarias, D, Perovic, DD & Ozinn, GA 2006, 'Materials chemistry for low-k materials', *Materials Today*, vol. 9, no. 3, pp. 22-31.
80. Henisch, HK 1970, *Crystal Growth in Gels*, Penn. State Univ. Press, USA
81. Henisch, HK 1988, *Crystals in Gels and Liesegang rings*, Cambridge University Press, USA.
82. Henisch, HK, & Garcia-Rutz, JM 1986, 'Crystal Growth in Gels and Liesegang Ring Formation', *J. Crystal Growth*, vol. 75, pp. 195-202.
83. Herrmann WA, Herdweck E & Pajdla L 1991, *Inorg. Chem.*, vol. 12, pp. 2579.
84. Hikmet, RAM & Kemperman, H 1998, 'Electrically switchable mirrors and optical components made from liquid-crystal gels', *Nature.*, vol. 392, no. 6675, pp. 476-479.
85. Hirano, Shin-ichi, Toshinobu Yogo, Kō-ichi Kikuta, & Katsuya Yamagiwa 1992, 'Preparation of  $\beta$ -BaB<sub>2</sub>O<sub>4</sub> Powders and Thin Films by Sol-Gel Method', *Journal of the American Ceramic Society*, vol. 75, no. 9, pp. 2590-2592.

86. Howe, S & Elbaum, C 1961, 'The occurrence of dislocations in crystals grown from the melt', *Phil. Mag.*, vol.6, no.70, pp.1227- 1240.
87. Hubner, KH 1969, 'Uber Die Borate  $2\text{BaO}\cdot 5\text{B}_2\text{O}_3$ , Tief- $\text{BaO}\cdot\text{B}_2\text{O}_3$ ,  $2\text{BaO}\cdot\text{B}_2\text{O}_3$  and  $4\text{BaO}\cdot\text{B}_2\text{O}_3$ ', *NeuesJahrb. Mineral Monatsh*, pp. 335-343.
88. James,JA, & Kell,RC 1975, *Crystal Growth*, Pergamon Press, New York.
89. Janarthanan, S 2010, *Investigations on The Growth And Characterization of Semicarbozone Family of Organic Single Crystals* . Ph.D.thesis, University of Madras.
90. Janotti,A, Van de Walle 2007, 'Native point defects in ZnO', *Phys. Rev. B*, vol.76, pp.165202.
91. Jayaprakash,P, Peer Mohamed, M & Lydia Caroline,M 2017, 'Growth, spectral and optical characterization of a novel nonlinear optical organic material: D-Alanine DL-Mandelic acid single crystal', *J. Mol. Stru.*, vol.1134, pp. 67-77.
92. Jayaprakasha ,P, Peer Mohamed,M, Krishnan,P Nageshwari, M, Mani,G & Lydia Caroline,M 2016,'Growth, spectral, thermal, laser damage threshold, microhardness, dielectric, linear and nonlinear optical properties of an organic single crystal: L-Phenylalanine DL-Mandelic acid', *Physica B*, vol.503, pp. 25-31.
93. Jayaprakasha ,P, Sangeethaa ,P, Peer Mohamed,M, Vinithad ,G, Muthua , S, Prakashe ,M & Lydia Caroline,M 2017,'Growth and characterization of DL-Mandelic acid ( $\text{C}_6\text{H}_5\text{CH}(\text{OH})\text{CO}_2\text{H}$ ) single crystal for third-order nonlinear optical applications', *Journal of Molecular Structure*.
94. Jenny Pickworth Glusker, Dick Van Der Helm, Warner E. Love, Marilyn L. Dornberg, Jean A. Minkin, Carroll K. Johnson, & Patterson,AL 1965, 'X-ray

- Crystal Analysis of the Substrates of Aeonitase.VI, The Structures of Sodium and Lithium Dihydrogen Citrates', *Acta Cryst.*, vol. 19, pp. 561.
95. Jiaqi Ni, Keqing Han, Muhuo Yu & Chenyu Zhang 2017, 'The Influence of Sodium Citrate and Potassium Sodium Tartrate Compound Additives on Copper Electrodeposition', *International Journal of Electrochemical Science*, vol.12, pp.6874-6884.
96. John P.Lambooy 1949, 'The Synthesis of 4,5-Diethyl-o-phenylenediamine through the Nitration of O-Diethylbenzene', *Journal of American Chemical Society.*, vol.71, no.11, pp 3756–3757.
97. Junyan Gao, Chuang Xie, Yanlei Wang, Zhao Xu & Hongxun Hao 2012, 'Solubility data of trisodium citrate hydrates in aqueous solution and crystal-solution interfacial energy of the pentahydrate', *Cryst. Res. Technol.*, vol.47, no. 4, pp.397 – 403.
98. Kampf, AR & Mill,SJ 2010, 'Lead hydrogen citrate monohydrate,  $Pb(C_6H_6O_7) \cdot H_2O$ , formation during specimen cleaning: a cautionary mineralogical tale', *Mineralogical Magazine*, vol. 74, no.4, pp. 683–690.
99. Keller,W & Muhlbaurer,A 1981, 'Floating Zone Silicon', *Kristall Und Technik*, vol.12, no.16, pp.1418, Marcel Dekker, New York.
100. Kentaro Ino, Yukio Inatsu 2001, *Mat.Res.Bull* , vol.36, pp.207.
101. Kim,Y & Tamaoki NA 2014, 'photoresponsive planar chiral azobenzene dopant with high helical twisting power', *J Mater Chem C.* , vol.2, no.43, pp.9258–9264.
102. Kim,Y, Wada, M & Tamaoki, N,2014,' Dicholesteryl icosanedioate as a glass-forming cholesteric liquid crystal: properties, additive effects and application in color recording', *J Mater Chem C.*, vol.2, no.10, pp.1921–1926.

103. Kinbara, K, Sakai, K, Hashimoto, Y, Nohira, H & Saigo, K 1996, 'Chiral discrimination upon crystallization of the diastereomeric salts of 1-arylethylamines with mandelic or p-methoxymandelic acid: interpretation of the resolution efficiencies on the basis of the crystal structures', *J Chem Soc Perkin Trans 2*, vol.12, pp.2615–2622.
104. Kinbara, K 2005, 'Design of resolving agents based on crystal engineering' *Synlett*, vol.5, pp.732–743.
105. Kitazawa, M, Higuchi, R & Takahashi, M 1994, 'Ultraviolet generation at 266 nm in a novel organic nonlinear optical crystal: l-pyrrolidone-2-carboxylic acid', *Appl. Phys. Lett.* vol.64, pp.2477-2479.
106. Kobayashi, Y & Saigo, K 2005, 'Periodic ab initio approach for the cooperative effect of CH/ $\pi$  Interaction in crystals: relative energy of CH/ $\pi$  and hydrogen-bonding interactions', *J Am Chem Soc* 2005, vol.127, pp.15054–15060.
107. Kobayashi, Y & Saigo, K 2007, 'The Role of CH/ $\pi$  Interaction in the stabilization of less-soluble diastereomeric salt crystals', *Chem Rec* 2007, vol.7, pp.47–56.
108. Kobayashi, Y, Hiroaki, H, Maeda, J & Saigo, K 2008, 'Factors determining the pattern of a hydrogen-bonding network in the diastereomeric salts of 1-arylethylamines with enantiopure P-chiral acids', *Chirality* 2008, vol.20, pp. 577–584.
109. Kobayashi, Y, Maeda, J & Saigo, K 2006, 'Synthesis and chiral recognition ability of o-ethyl (2-naphthyl) phosphonothioic acid', *Tetrahedron Asymmetry* 2006, vol.17, pp.1617–1621.
110. Kobayashi, Y, Morisawa, F & Saigo, K. Enantiopure 2006, 'O-substituted phenylphosphonothioic acids: chiral recognition ability during salt

- crystallization and chiral recognition mechanism', *J Org Chem* 2006, vol.71, pp.606–615.
111. Kosa, T, Sukhomlinova, L, Su,L, et al., 2012, 'Light-induced liquid crystallinity' *Nature*, vol.485, no.7398, pp.347–349.
  112. Kunjomana, AG & Chandrasekharan, KA 2005, 'Microhardness Studies of GaTe Whiskers', *Cryst. Res. Technol.*, vol.40, pp.782-785.
  113. Kurtz, SK & Perry, TT 1968, 'Powder technique for the evaluation of nonlinear optical materials', *Journal of Applied Physics*, vol.39, pp.3798-3813.
  114. Kutoglu, A, & Scheringer, C 1983, 'Nicotinic Acid, C<sub>6</sub>H<sub>5</sub>NO<sub>2</sub>: Refinement', *Acta Cryst.*, C39, 232-234 .
  115. Lakshmanan Govindasamy, Thomas Kukar, Wei Lian, Brenda Pedersen, Yunrong Gu, Mavis Agbandje-McKenna, Shouguang Jin, Robert McKenna, & Donghai Wub 2004,' Structural and mutational characterization of L-carnitine binding to human carnitine acetyltransferase', *Journal of Structural Biology*, vol. 146, pp. 416–424.
  116. Langkilde,A, Oddershede, J & larsen S 2002, ' Salts of lactic acid and 1-phenyl-ethylamine, their structures and relative stabilities', *Acta Cryst B*, vol.58, pp.1044–1050.
  117. Laudise, RA 1959, *J. Am. Chem. Soc.*, vol.81, pp.562-566.
  118. Laudise, RA 1970, 'The Growth of Single Crystals', Prentice Hall, New Jersey.
  119. Laudise, RA 1975, *Crystal growth and characterization*, ed. Ueda R. and Millin J.B, North-Holland Publishing Co.

120. Leela,S, Deepa Rani,T, Subashini,A, Brindha,S, Ramesh Babu,R & Ramamurthi,K 2017, 'Studies on growth and characterization of nonlinear optical material 4-chloro-4 methoxy benzylideneaniline: A Schiff base organic material', Arabian Journal of Chemistry, vol.10, supplement 2, pp. S3974-S3981
121. Lekshmi, P, Nair, Bijini, BR, Prasanna, S, Nair, CNK, Deepa, M, & Rajendra Babu, K 2014, 'Growth and characterization of crystals of a new organic complex of thiourea with quinine sulphate dehydrate: an NLO material', Spectrochim. Acta Part A, Vol. 120, pp. 517-523.
122. Lekshmi, PN, Bijini, BR , Divya, R & Deepa, M 2015, ' Crystal structure, spectral and thermal characterisation of gel grown cobalt (II) nicotinate tetrahydrate', International Journal of ChemTech Research, ISSN: 0974-4290, vol.8, no.12, pp 616-622.
123. Levine, BF, Bethea, CG, Thermond, RD, Lynch, RT & Berstein, JL 1979, 'An organic crystal with an exceptionally large optical second-harmonic coefficient: 2-methyl-4-nitroaniline', J. Appl. Phys., vol. 50, pp. 2523-2527.
124. Li, Q 2013, Photoresponsive cholesteric liquid crystals, intelligent stimuli-responsive materials: from well-defined nanostructures to applications New York (NY): Wiley.
125. Lin, Shujie, Zhaoyang Sun, Bochang Wu, & Chuangtian Chen 1990,'The nonlinear optical characteristics of a  $\text{LiB}_3\text{O}_5$  crystal', Journal of Applied Physics, vol.67, no. 2, pp.634-638.
126. Liu, H, Yang, W, Zhou, W, Xu, Y, Xie, J & Li, M 2013, 'Crystal structures and antimicrobial activities of copper (II) complexes of fluorine-containing thioureido ligands', Inorg. Chim. Acta., vol. 405, no.24, pp.387-394.

127. Love WE & Patterson AL 1960, ' X-ray Crystal Analysis of the Substrates of Aconitase. III. Crystallization, Cell Constants, and Space Groups of Some Alkali Citrates', *Acta crystallography*, vol. 13, pp. 426.
128. Luna Bhowmick, 2012 Synthesis and Characterization of La Doped  $\text{Bi}_4\text{Ti}_3\text{O}_{12}$  ceramics. Ph.D. thesis, National Institute of Technology, Orissa.
129. Maimnan, TH 1960, 'Stimulated Optical Radiation in Ruby', In *Nature*, vol.187, no. 4736, pp.493-494.
130. Manivannan,S, & Dhanuskodi 2004, 'Synthesis, crystal growth, structural and optical properties of an organic NLO material', *J. Cryst. Growth*, vol.262, pp. 473-478.
131. Marder, SR, Perry, JW, & Schaefer, WP 1994,' Organic salts with large second-order optical nonlinearities', *Chem. Mater.*, vol.11, pp.37–47.
132. Marudhu,G 2015, Growth And Characterization of Nonlinear Optical 4-APMP, Amino Acids Doped NaAP AND DGBCM Single Crystals, Ph.D.thesis, B.S.Abdur Rahman University, B.S. Abdur Rahman Institute of Science & Technology.
133. Marwaha, RK, & Shah, BS 1988, ' Microhardness studies on Benzoic Acid Single Crystals', *Cryst. Res. Technol.*, vol.23, no.4, pp.K63-K65 .
134. Mary Freeda, M 2012, 'Growth and Characterisation of Some Alkaline Earth Tartrate Single Crystals', Ph.D. thesis, Manonmaniam Sundaranar University, Tirunelveli.
135. Mashkovskiy, MD & Lekarstvennye Sredstva 2008, RIA, ' Novaya Volna', Moscow, pp.1206.
136. Matthias, WK, Christian, E, Martin, W & Stefan, L 2006, 'Second-Harmonic Generation from Magnetic Metamaterials', *Science*, vol. 313,pp. 502–504.

137. Matzapetakis, M, Karligiano, N, Bino, A, Dakanali, M, Raptopoulou, CP, Tangoulis, V, Terzis, A, Giapintzakis, J & Salifoglou, A 2000, 'Manganese Citrate Chemistry: Syntheses, Spectroscopic Studies, Structural, Characterizations of Novel Mononuclear, Water-Soluble Manganese Citrate Complexes', *Inorg. Chem.*, vol.39, pp. 4044-4051.
138. Michael H. Penner 2010, *Basic Principles of Spectroscopy, Food Analysis*, Part of the Food Analysis book series (FSTS), pp 375-385 First Online: 16 February 2010.
139. Mirmehrabi, M, Rohani, R, Murthy, KSK, Radatus, B 2004, 'Characterization of tautomeric forms of ranitidine hydrochloride: Thermal analysis, solid-state NMR, X-ray', *J. Cryst. Growth*, vol. 260, pp. 517-526.
140. Misoguti, L, Varela, ATF, Nunes, D, *et al.*, 1996, 'Optical properties of L-alanine organic crystals', *Opt. Mater.*, vol. 6, pp. 147-152.
141. Modiya, PR. & Patel CN 2012, 'Synthesis and screening of antibacterial and antifungal activity of 5-chloro-1, 3-benzoxazol-2 (3 h)-one derivatives', *Org. Med. Chem. Lett.*, vol.2, pp.29.
142. Mori, Yusuke, Ikuo Kuroda, Satoshi Nakajima, Takatomo Sasaki, & Sadao Nakai 1995, 'New nonlinear optical crystal: cesium lithium borate', *Applied Physics letters*, vol.67, no. 13, pp. 1818-1820.
143. Motoharu Tanaka & Takuji Kawasbma 1965, 'Some 4-Substituted O-Phenylenediamines as Reagents For Selenium', *Talanta*, Pergamon Press Ltd, vol. 12, pp. 211-219.
144. Mullin, JW 1972, 'Crystallization', Second edition, Butterworth's and Heinemann London.



145. Mullin, JW (Ed)1976, 'Symposium on Industrial Crystallization', Plenum Press, New York.
146. Mythili,P, Kanagasekaran,T, Gopalakrishnan,R, Ramasamy,P 2008, 'Growth and characterization of semi-organic nicotinium dihydrogen-phosphate crystals', *Journal of Crystal Growth*, vol. 310, pp.1760–1764.
147. Naidenko, ES, Yukhin,Yu.M, Afonina, LI and Gerasimov, KB 2012, 'Obtaining Bismuth-Potassium Citrate', *Chemistry for Sustainable Development* , vol.20, pp. 523-528.
148. Nalwa, HS, and Miyata, S 1997, *Nonlinear Optics of Organic Molecules and Polymers*, CRC Press Inc., New York.
149. Nikogosyan, DN 1991,'Beta barium borate (BBO). A review of its properties and applications', *Applied Physics A* 52, no. 6 , pp.359-368.
150. Omer Tamer, Davut Avc &Yusuf Atalay 2016,'Synthesis, X-ray crystal structure, photo-physical characterization and nonlinear optical properties of unique manganese complex with picolinate and 1, 10 phenantroline: toward the designing of new high NLO response crystal', *J. Physics and Chemistry of Solids*, vol.99, pp.124-133.
151. Omegala Priakumari,R, Grace Sahaya Sheba,S & Gunasekaran, M 2015,'Growth and characterization of semi-organic nonlinear optical crystals of L-leucine hydrochlorobromide (LEHClBr)', *Can. J. Phys.*, vol. 93, pp. 836–840.
152. Palkina, KK, Kucshinova TB & Skorikov VM 2005, ' Crystal structure of KBi(cit) center dot 2H(2)O', *Russian Journal of Inorganic Chemistry*, vol. 50, no.9, pp. 1357-1361.
153. Pamplin, BR (ed.) 1980, *Special Issue on Biological Crystal Growth*, *ibid.* 80.

154. Pamplin, BR 1980, Crystal Growth, 2<sup>nd</sup> ed., International Series on the Science of the Solid State, Pergman Press, London.
155. Pamplin, BR,(ed.) 1979, 'Crystal Growth', First Edition, Pergamon press, Oxford, New York, pp. 672.
156. Pandya, ND, Joshi, JH, Jethva, HO & Joshi, MJ 2017, 'Structural, Spectroscopic and Thermal Studies of Potassium Di-Hydrogen Citrate Crystal', Mechanics, Materials Science & Engineering Journal.
157. Paramasivam, P 2012, Studies on the Growth and Characterization of some optical crystals, Ph.D.thesis, Bharathidasan University.
158. Patil, PS, Dharmaprakash, SM, Ramakrishna, K, Fun, H , Kumar, RS & Rao, DN , 'Second harmonic generation and crystal growth of new chalcone derivatives', J. Crys. Growth, vol.303, pp. 520-524.
159. Paul O'Brien, Henryk Salacinski & Majid Motevalli 1997, 'The X-ray Single Crystal Structure of a Gallium Citrate Complex  $(\text{NH}_4)_3[\text{Ga}(\text{C}_6\text{H}_5\text{O}_7)_2]\cdot 4\text{H}_2\text{O}$ ', J. Am. Chem. Soc. ,vol.119, pp. 12695-12696.
160. Peramaiyan,G, Mohan Kumar, R & Bhagavannarayana, G, 2014,' Crystal growth, structural, optical and dielectric studies of ammonium p-toluenesulfonate', Journal of Crystal Growth, vol.408, pp.14-18.
161. Peter G. Schunemann 2001,'Crystal Growth and Properties of Nonlinear Optical Materials', AIP Conf. Proc., vol.916, no.541.
162. Petrov,TG, Treivus,EB & Kasatkin AP 1971, 'Growing Crystals from Solution: Vyrasivanie Kristallov Iz Rastvorov', Consultants Bureau, New York, pp. 106.
163. Petrov,TG, Treivus,EB, Kasatkin,AP 1969, 'Growing crystals from solution', Consultant's Bureau, Adivision of Plenum publishing Corp., New York.

164. Pfann, WG 1966, Zone Melting, John Wiley, New York, 2<sup>nd</sup> ed.
165. Piper, WW & Polich, SJ 1961, 'Vapor-Phase Growth of Single Crystals of II-VI Compounds', J. Appl. Phys., vol. 32, pp.1278.
166. Prasad,PN & Williams, DJ 1991,' Introduction to nonlinear optical effects in molecules and polymers', Wiley-Interscience, New York.
167. Prasanna, S, Bijini, BR., Rajendra Babu, K, Eapen, SM, Deepa, M & Nair, CMK 2011, 'Growth and characterization of a novel polymer of manganese(II)nicotinate single crystal', J. Cryst. Growth, vol. 333, no.1, pp. 36-39.
168. Prashant Dwivedi, Ram Kripal & Madan Gopal Misra 2010, 'EPR and optical absorption studies of Cu<sup>2+</sup> ions doped magnesium citrate decahydrate single crystals', Journal of Alloys and Compounds, vol. 499, pp. 17-22.
169. Pritula,I, Kosinova, A, Kolybayeva, M, Puzikov, V, Bondarenko, S, Tkachenko,V & Fesenko,O 2008, 'Optical, structural and microhardness properties of KDP crystals grown from urea-doped solutions', Mater. Res. Bull, vol.43, no.10, pp. 2778-2789.
170. Quan He, Hassan Gomaa, Sohrab Rohani, Jesse Zhu & Michael Jennings 2010,'Chiral Discrimination in Diastereomeric Salts of Chlorine Substituted Mandelic Acid and Phenylethylamine', Chirality , vol.22, pp.707-716.
171. Quinn, JB & Quinn, GD 1997, 'Indentation Brittleness of Ceramics: A Fresh Approach', J. Mater. Sci., vol.32, pp.4331-4346.
172. Rai, R & Varma,K 2005,'Growth and characterization of single crystal of pentachloropyridine', Journal of Crystal Growth, vol.285, pp.111-116.
173. Rai,RN, Ramasamy,P, & Lan, CW 2002, 'Synthesis and crystal growth of binary organic NLO material UNBA', J. Cryst. Growth, vol.235, pp. 499-504.

174. Rai, US, Manjeet Singh, & Rai, RN 2017, 'Solid state synthesis, structural, physicochemical and optical properties of an inter-molecular compound: 2-hydroxy-1, 2-diphenylethanone-4-nitro-ophenylenediamine system', Journal of Solid State Chemistry, vol.253, pp.63-72.
175. Ramasamy, P, & Santhanaraghavan, P 1999, 'Crystal Growth Processes and Methods', KRU Publications, Kumbakonam.
176. Rampal, VV 2004, Photonics Elements and devices, Wheeler publishers, Allahabad.
177. Ranjani Viswanatha, Sameer Sapra, Subhra Sen Gupta, Satpati,B, Satyam,PV, Dev, BN, Sarma, DD 2004, 'Synthesis and Characterization of Mn-Doped ZnO Nanocrystals', J. Phys. Chem. B108, vol.20, pp.6303.
178. Rejeena, I 2015, Laser Induced Linear and Nonlinear Optical Studies on Certain Metal Halides and Tartrate Crystals for Photonic Applications. Ph.D. Thesis, International School of Photonics, Cochin University of Science and Technology.
179. Richard David Gandour, William Jay Colucci & Frank R. Fronczek 1985,' Crystal Structures of Carnitine and Acetylcarnitine Zwitterions: A Structural Hypothesis for Mode of Action', Bioorganic Chemistry, vol.13, pp. 197-208.
180. Richardson, CF, Johnsson, M, Bangash, FK, Sharma, VK, Sallis, JD & NancoUas GH 1990,'The effects of citrate and phosphocitrate on the kinetics of mineralization of calcium oxalate monohydrate', Mat Res Soc Syrup Proc,vol. 174, pp.87-92 .
181. Robert Allen Meyers 1991, Encyclopedia of lasers and optical technology, Elsevier, Academic Press, London.

182. Robert, C, Anderson, Michael Shapiro & Edwin, BV 1995, 'Acetyl-L-carnitine Hydrochloride', *Acta Cryst.* C51, pp. 2570-2572.
183. Roger Qiu, S, Andrzej Wierzbicki, Alan Salter, E, Salvador Zepeda, Chris, AO, John, RH, George HN, Anita MC & James JDe Yoreo 2004, 'Modulation of calcium oxalate monohydrate crystallization by citrate through selective binding to atomic steps', *Journal of American Chemical Society*, vol.127, no.25, pp.9036-9044.
184. Roopakumar,R, Raman,G, & Gnanam,FD, 1992, *Cryst.Res.Technol*, vol.27, pp.92.
185. Rosker,MJ, & Tang CL 1985, 'Widely tunable optical parametric oscillator using urea', *Journal of Optical Society of America.B.*, vol.2, pp.691-696.
186. Roy, SM, Sudarsanakumar, MR., Dhanya, VS, Suma, S & Prathapachandra Kurup, MR. 2014, 'Crystal Growth, Spectral, Magnetic, Antibacterial and Antifungal Studies of Co (II) and Ni (II) Complexes of 4-Nitrobenzoic Acid', *J. Korean Chem. Soc.*, vol.58, no.3, pp. 258–266.
187. Şahin, O Uzun, O, Kölemen, U & ve Uçar, N 2007, 'Dynamic hardness and reduced modulus determination on the (001) face of  $\beta$ -Sn single crystals by a depth sensing indentation technique', *J. Phys., Condens. Matter*, vol. 19, article id.306001, pp.17 .
188. Sallis, JD, Brown, MR & Parker, NM, Sikes, CS, Wheeler, AP (eds) 1991, 'Phosphorylated and nonphosphorylated carboxylic acids, influence of group substitution and comparison of compounds to phosphocitrate with respect to inhibition of calcium salt crystallization', *ACS symposium series - surface reactive peptides and polymers*, American Chemical Society Publishers, Washington, pp. 149-160.

189. Sangwal, K 2000, 'On the Reverse Indentation Size Effect and Microhardness Measurement of Solids', *Mater. Chem. Phys.*, vol.63, pp. 145.
190. Sangwall, K, Surowska, B & Blaziak, P 2002, 'Analysis of the indentation size effect in the microhardness measurement of some cobalt-based alloys', *Mater. Chem. Phys.*, vol.77, no. 2, pp.511-520.
191. Santhana Ragavan, P, & Ramasamy P 2000, "Crystal Growth Processes and Methods", First Edition, KRU Publications, Chennai, pp. 404.
192. Sathya,P, Anantharaja,M, Elavarasu, V & Gopalakrishnan, R 2015,' Growth and characterization of nonlinear optical single crystals: bis(cyclohexylammonium) terephthalate and cyclohexylammonium para-methoxy benzoate ', *Bull. Mater. Sci.*, vol. 38, No. 5, pp. 1291–1299 .
193. Sauter, EG 1996, *Nonlinear optics*, 1<sup>st</sup> edi, John Wiley& Sons Inc, New York.
194. Schafer, H 1964, *Chemical Transport Reactions*, Academic Press, New York.  
<http://www.ritsumei.ac.jp/~katsuno/nakadalab/research/refs/referenc.html>
195. Schimidt, MU, Bruning, J, Glinnermann, J, Hutzler, MW, Morschel, P, Ivashevskaya, SN, van de Streek, J, Braga, D, Maini, L, Chierotti, MR, Gobetto, R 2011,' The thermodynamically stable form of solid barbituric acid: the enol tautomer', *Angew. Chem.*, vol. 34, no.50, pp.7924-7926.
196. Schmidbaur,H , Annette Schier & Angela Bayler 1998,'The Solution and Solid State Structure of L-Carnitine L-Tartrate', *Z. Naturforsch.* 53 b, pp.788-791.
197. Schmidt, A, Kababya, S, Appel, M, Khatib, S, Botoshansky, M, Eichen, YJ 1999, *Am. Chem. Soc.*, vol.121, pp. 11291.

198. Schmidtke, J, Kniesel, S & Finkelmann, H 2005, 'Probing the photonic properties of a cholesteric elastomer under biaxial stress. *Macromolecules*' vol.38, no.4, pp.1357–1363.
199. Schöltz, H 1967, *Crystal Growth* (ed. H. S. Peiser), Pergamon Press, Oxford.
200. Seidler, T, Stadnicka, K & Champagne, B 2014, 'Second-order nonlinear optical susceptibilities and refractive indices of organic crystals from a multiscale numerical simulation approach', *Adv. Opt. Mater.*, vol. 2, pp.1000–1006.
201. Seim, H, Seim, in H, Loester, H (eds) 1996, *Carnitine: Pathochemical Basics and Clinical Applications*, Ponte Press, Bochum.
202. Selvasekharapandian, S, Vivekanandan, K & Kolandaivel, P 1999, 'Vibrational Studies of Gel Grown Ferroelectric  $\text{RbHC}_4\text{H}_4\text{O}_6$  and  $\text{SrC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$  Crystals', *Cryst. Res. Technol*, vol.34, no.7, pp. 873-880.
203. Shah, PC, 1993, *Ind. J. Phys*, vol.67 A, pp.467.
204. Sharma, SO & Malhotra, LK 1971, 'Growth of single crystals of cadmium sulphide in evacuated ampoules' *J. Cryst. Growth*, vol.10, pp.199.
205. Sheelarani, V & Shanthi, J 2015, 'Growth And Characterization of Nonlinear Optical Single Crystal: Nicotinic L-Tartaric', *AIP Conference Proceedings* 1665, pp.100003.
206. Shen, YR 1984, *Principles of nonlinear optics*, John Wiley and Sons, New York.
207. Sihui Long, Mingtao Zhang, Panpan Zhou, Faquan Yu, Sean Parkin, & Tonglei Li 2016, 'Tautomeric Polymorphism of 4-Hydroxynicotinic Acid', *Crystal growth & design*, The American Chemical Society, vol.16, no.5, pp. 2573-2580 .

208. Siva Shankar,V, Sankar,R, Siddheswaran,R, Jayavel,R, & Murugakoothan, P 2008, 'Growth and characterization of tetra L-lysine alanine mono hydrochloride dehydrate (tlamhcl), a new semiorganic nonlinear optical single crystal', Mat. Che. and Phys., vol. 109, pp.119-124.
209. Sivakumar, K, Senthilkumar, M & Ramachandra raja, C 2017,' Growth, Spectral, Optical and Nonlinear Optical Characterization of R- Mandelic Acid Single Crystals', International Journal for Research in Applied Science & Engineering Technology (IJRASET), vol.5, ISSN: 2321-9653.
210. Sivakumar,K, Senthilkumar, M & Ramachandra Raja, C 2018,'A Study on the Structural, Spectral and Nonlinear Optical Properties of R-Phenylalanine-S-Mandelic Acid Single Crystals', IJRAR- International Journal of Research and Analytical Reviews Research Paper, vol.5, no.1, ISSN 2349-5138.
211. Sreevalsa,VG 2012, Investigations on some amino acid based single crystals for nonlinear optical applications and amino acid capped nanocrystals. Ph.D.thesis, Cochin University of Science and Technology.
212. Stockbarger, C 1938, Rev. Sci. Insdr., vol.7,pp. 133.
213. Suezawa,H, Ishihara,S, Umezawa,Y, Tsuboyama,S & Nishio M 2004,'The aromatic CH/ $\pi$  hydrogen bond as an important factor in determining the relative stability of diastereomeric salts relevant to enantiomeric resolution-a crystallographic database study', Eur J Org Chem, vol. 23, pp.4816–4822.
214. Suksrichavalit, T, Prachayasittikul, S, Nantesenamat, C, Ayudhya, CI & Prachayasittikul, V 2009, 'Copper complexes of pyridine derivatives with superoxide scavenging and antimicrobial activities', ISSN:0223-5234, Eur. J. Med. Chem., vol. 44, no.8,pp. 3259-3265.



215. Sumetha Suwanboon 2008, 'Structural and Optical Properties of Nanocrystalline ZnO Powder from Sol-Gel Method', *Science Asia*, vol.34, pp.031-034.
216. Suneetha, N & Rajan Babu, D 2018, 'Growth and Characterization of Trisodium Citrate Pentahydrate- a nonlinear optical material', *International Journal of Pure and Applied Mathematics*, vol.118, no. 18, pp.4589-4599, ISSN: 1311-8080 (printed version); ISSN: 1314-3395 (on-line version)
217. Suresh Sagadevan & Shanmuga Sundaram Anandan 2014,' A Study of Mechanical Behaviour of Anilinium D-Tartrate Single Crystal', *International Journal of Materials Engineering*, vol.4, no.2, pp.70-74.
218. Tadeja Birsa Celic, Zvonko Jaglicic, Karoly Lazar & Natas Zabukovec Logar 2013, 'Structure and magnetic properties of a new iron(II)citrate coordination polymer', *Acta Cryst. B69*, pp. 490– 495.
219. Takashi Taniguchi & Shinobu Yamoka 2001, 'Spontaneous nucleation of cubic boron nitride single crystal by temperature gradient method under high pressure', *Journal of Crystal Growth*, vol.222, pp.549-557.
220. Tamaoki, N 2001,' Cholesteric liquid crystals for color information technology', *Adv Mater.* ,vol.13, no.15, pp.1135–1147.
221. Tamaoki, N, Song, S, Moriyama, M, et al. 2000,' Rewritable fullcolor recording in a photon mode', *Adv Mater.* ,vol.12, no.2, pp.94–97.
222. Tamaoki, N, Kruk, G & Matsuda, H 1999,'Optical and thermal properties of cholesteric solid from dicholesteryl esters of diacetylenedicarboxylic acid', *J Mater Chem.* , vol.9,no.10, pp.2381–2384.
223. Thomas V. Van Auken 1991, 'Solubility and heat of solution of potassium dihydrogen citrate', *J.Chem. Eng. Data*, vol. 36, pp. 255-257.

224. Tiselius, HG, Berg, C, Fornander, AM & Nilsson, MA 1993, 'Effects of citrate on the different phases of calcium oxalate crystallization', *Scanning Microsc.*, vol.7, pp.381-390 .
225. Tothadi, S, Bhogala, BR, Gorantla, AR, Thakur, TS, Jetti, RKR & Desiraju, GR 2012, *Chem. Asian. J.* ,vol.7, pp.330-342.
226. Toulemonde,M, Dufour,C & Parrmier,E 1992, 'Transient thermal process after a high-energy heavy-ion irradiation of amorphous metals and semiconductors', *Phys. Rev. B*, vol.46, pp.14362-14369.
227. Usha,S & Charles Kanakam Christopher 2016,' Synthesis, Characterisation of Novel NLO Material: bis-L-Phenylalanine Mandelate', *Chemical Science Transactions*, vol.5, no.1,pp.179-186, ISSN:2278-3458 2016.
228. Venkateshwarlu,M, Bhaskar Rao,T, kishan Rao,K 1989, 'Growth and characterization of triammonium citrate', *Bull. Mater. Sci.*, vol. 12, no. 2, pp. 143-146
229. Vijayan,N, Babu,RR, Gunasekaran,M, Gopalakrishnan, R, Kumaresan,R, Ramasamy,P & Lan,C 2003,'Studies on the growth and characterization of p-hydroxyacetophenone single crystals', *Journal of Crystal Growth*, vol. 249, pp. 309-315.
230. Wang, D, Cheng, X, Shi,Y, Sun, E, Tang, X, Zhuang, C & Shi, T 2009, 'Synthesis and different substituent effects on spectral and electrochemical properties of porphyrin nicotinic acid binary compounds', *Solid State Sci.*, vol. 11, pp. 195-199.
231. Wang,L, Yu,LL, Xiao,X, Wang,Z, Yang,PY, He,WL & Yang,H 2012,' Effectsof1,3,4-oxadiazoleswithdifferent rigid cores on the thermal and electro-optical performances of blue phase', *Liq. Cryst.*, vol.39, pp. 629–638.

232. Wang,X, Yuan,X, & Li, W 2002, *J. Crystal Growth*, vol.672, pp.237-239.
233. White, TJ, Bricker,RL, Natarajan, LV, et al., 2010, 'Electrically switchable, photoaddressable cholesteric liquid crystal reflectors', *Opt Express.*, vol.18,no.1,pp.173–178.
234. Wierzbicki, A, Sikes, CS, Sallis, JD, Madura, JD, Stevens, ED & Martin, KL 1994, 'Scanning Electron Microscopy and Molecular Modeling of Inhibition of Calcium Oxalate Monohydrate Crystal Growth by Citrate and Phosphocitrate', *Calcif Tissue Int*, vol. 56, pp.297-304.
235. Wood, L and Sharp, FJ 1994, *Nonlinear Optics& Electro-Optics hand book*, McGraw Hill Inc. New York.
236. Wright, WB, & King, GSD 1950, 'Optical Properties and Preliminary X-ray Investigation of Nicotinic Acid and Nicotinamide', *Acta Cryst.*, vol. 3, pp.31.
237. Yoshioka,R, Hiramatsu,H, Okamura,K, Tsujioka,I & Yamada,S 2000,' Crystal structure-solubility relationships in optical resolution by diastereomeric salt formation of DL-phenylglycine with (1S)-(+)-camphor-10-sulfonic acid', *J Chem Soc Perkin Trans 2*,1vol.10, pp.2121–2128.
238. Yukhin Yu. M & Mikhailov Yu. I 2001, 'Khimiya Vismutovykh Soyedineniy i Materilov, Izd-vo SO RAN', Novosibirsk.
239. Zacharis DE & Glusker 1993, 'Structure of citrate double salt: potassium di-hydrogen citrate - lithium potassium hydrogen citrate monohydrate', *Acta cryst. C49*, pp. 1727-1730.
240. Zeynep Yarbass, I, Abdulhalik Karabulut & Bunyamin Karabulut 2011, 'EPR Studies of Copper-Doped Potassium Dihydrogen Citrate (C<sub>6</sub>H<sub>7</sub>KO<sub>7</sub>) Single Crystal', *Appl Magn Reson*, vol. 41, pp. 51–57.

241. Zeynep Yarbasi, Abdulhalik Karabulut & Bunyamin Karabulut 2011 , ‘ EPR and optical studies of vanadium doped potassium dihydrogen citrate ( $C_6H_7KO_7$ ) single crystal’, *Spectrochimica Acta.*, vol. 79, pp. 1304-1307.
242. Zheng, QD, He, GS, Lin, TC & Prasad, PN 2003,’ Synthesis and properties of substituted (p-aminostyryl)-1(3-sulfooxypropyl) pyridinium inner salts as a new class of two-photon pumped lasing dyes’, *J. Mater. Chem.*, vol.13, pp.2499–2504.
243. Zulehner W 1983, ‘Czochralski Growth of Silicon’, *J.Cryst.Growth*, vol.65, pp.189-213.
244. Zyss, J 1979, ‘Hyperpolarizabilities of substituted conjugated molecules. III. Study of a family of donor-acceptor disubstituted phenyl-polyenes’, *J. Chem.Phys.*, vol.71, pp. 909-917.