

DAFTAR PUSTAKA

1. G,S, Sulistiyawati.; Deswita, D.; Wulanawati, A.; Romawati, A.: Sintesis Hidroksiapatit Berpori dengan Porogen Kitosan dan Karakterisasinya. *J. Kimia dan Kemasan*. 2012, 34(1), 219
2. Nasker.; P, Mukherjee M.; Kant S.; Tripathy S.; Sinha A.; Das M.: Fluorine substituted nano hydroxyapatite: Synthesis, bio-activity and antibacterial response study. *Ceram Int.* 2018, 44(17), 22008-22013
3. Veljovic, D.; Matic, T.; Stamenic, T.; et al.: Mg/Cu co-substituted hydroxyapatite – Biocompatibility, Mechanical Properties and Antimicrobial Activity. *Ceram Int.* 2019, 45(17), 22029-22039
4. Swain, S.K.; Sarkar, D.: A comparative study: Hydroxyapatite Spherical Nanopowders and Elongated Nanorods. *Ceramic Int.* 2011, 37(7), 2927-2930
5. Liu, D.M.; Troczynski, T.; Tseng, W.J.: Water-based Sol-gel Synthesis of Hydroxyapatite: Process development.: *Biomaterials*. 2001, 22(13), 1721-1730
6. Hong, X.; Wu, X.; Zhang, Q, et al.: Hydroxyapatite Supported Ag₃PO₄ Nanoparticles With Higher Visible Light Photocatalytic Activity. *Appl Surf Sci.* 2012, 258(10), 4801-4805
7. Ferraz, M.P.; Monteiro, F.J.; Manuel, C.M.: Hydroxyapatite Nanoparticles: A Review of Preparation Methodologies.: *J. Appl. Biomater Biomech.* 2004, 2(2), 74-80
8. Qi, M.L.; He, K.; Huang, Z.N.; et al.: Hydroxyapatite Fibers: A Review of Synthesis Methods. *Jom.* 2017, 69(8), 1354-1360
9. Ofudje, E.A.; Adeogun, AI.; Idowu, M.A.; Kareem, S.O.: Synthesis and Characterization of Zn-Doped Hydroxyapatite: Scaffold Application, Antibacterial and Bioactivity Studies. *Heliyon*. 2019, 5(5)
10. Azis, Y.; Alfarisi, C.D.; Sri, R.M.: Synthesis of Hydroxyapatite Nanoparticles from Egg Shells by Sol-Gel Method. *J Mater Sci Eng.* 2018, 345, 1-6
11. Cahyaningrum, S.E.; Herdyastuti, N.; Devina, B.; Supangat, B.: Synthesis and Characterization of Hydroxyapatite Powder by Wet Precipitation Method. *J Mater Sci Eng.* 2017, 299, 1-5
12. Nosrati, H.; Sarraf, R.; Quang, D.: Materials Characterization Gas Injection approach for synthesis of hydroxyapatite nanorods via hydrothermal method. *Material Characterization*. 2020, 159, 1-8

13. Huang, A.; Dai, H.; Wu, X.; Zhao, Z.; Wu, Y.: Synthesis and Characterization of Mesoporous Hydroxyapatite Powder by Microemulsion Technique. *J. Materials. Res. Technol.* 2019, 8(3), 3158-3166
14. P, Anitha.; Haresh, M, Pandya.: Comprehensive Review of Preparation Methodologies of Nano Hydroxyapatite. *J. Environ. Nanotechnology.* 2014, 3(1), 101-121
15. Iqbal, N.; Kadir, M,R,A.; Mahmood, N,H, et al.: Characterization, Antibacterial and In Vitro Compatibility of Zinc-Silver Doped Hydroxyapatite Nanoparticles Prepared Through Microwave Synthesis. *Ceram Int.* 2014, 40(3), 4507-4513
16. Riaz, M.; Zia, R.; Ijaz, A.; Hussain, T.; Mohsin, M.; Malik, A.: Synthesis of Monophasic Ag Doped Hydroxyapatite And Evaluation Of Antibacterial Activity. *Mater Sci Eng C.* 2018, 90, 308-313
17. Samani, S.; Hossainalipour, S,M.; Tamizifar, M.; Rezaie, H,R.: In Vitro Antibacterial Evaluation Of Sol-Gel-Derived Zn-, Ag-, And (Zn + Ag)-Doped Hydroxyapatite Coatings Against Methicillin-Resistant Staphylococcus Aureus. *J. Biomed. Mater. Res. - Part A.* 2013, 101 A(1), 222-230.
18. Shavandi, A.; Bekhit, A.; Sun, Z.; Ali, A.; A Review of Synthesis Methods, Properties and Use of Hydroxyapatite as a Substitute of Bone. *J Biomimetics, Biomater Biomed Eng.* 2015, 25(98), 117
19. Xia, X.; Shen, J.; Cao, F.; et al.: A Facile Synthesis of Hydroxyapatite for Effective Removal Strontium Ion. *J. Hazard Mater.* 2019, 368, 326-335
20. Kolmas, J.; Groszyk, E.; Kwiatkowska-Rozycka, D.: Substituted Hydroxyapatite with Antibacterial Properties. *Biomed Res Int.* 2014, 178123
21. Fihri, A.; Len, C.; S, Varma, R.; Solhy, A.: A Review of Synthesis, Structure, and Applications in Heterogeneous Catalysis. *Coord Chem Rev.* 2017, 347, 48-76
22. Pogrebniak, A.; Sukhodub, L.; Sukhodub, L.; et al.: Composite Material with Nanoscale Architecture Based on Bioapatite , Sodium Alginate and Zno Microparticles. *Ceram Int.* 2019, 45(6), 7504-7514
23. Rahmaniah, R.: Sintesis dan Karakterisasi Hidroksiapatit dari Cangkang Kerang Darah (Anadara granosa) sebagai Bahan Baku Semen Tambal Gigi. *J Teknosains.* 2019, 13, 27-32
24. Robles-Águila, MJ.; Reyes-Avendano, J,A.; Mendoza, M,E.: Structural Analysis of Metal-Doped (Mn, Fe, Co, Ni, Cu, Zn) Calcium Hydroxyapatite Synthesized by a Sol-Gel Microwave-Assisted Method. *Ceram Int.* 2017, 43(15), 12705-12709

25. S, Foroutan, F.; et al.: Sol-Gel Based Materials for Biomedical Applications. *Mater Sci.* 2016, 77, 1-79
26. Kehoe, S.; et al.: Optimization of HAp for Orthopedic Application via The Chemical Precipitation Technique. In: *Thesis*. 2008
27. Zhou, Q.; Wang, T.; Wang, C.; et al.: Synthesis and characterization of Silver Nanoparticles-Doped Hydroxyapatite/Alginate Microparticles with Promising Cytocompatibility and Antibacterial Properties. *Colloids Surfaces A Physicochem Eng Asp.* 2020, 585
28. Sidiqa, A.N.; Djustiana, N.; Sunendar, B.; Febrida, R.: Surface Modification of Multilayer Coatings Ti-Al-Cr and Hydroxyapatite on Calcium Phosphate Cement with Sol-Gel Method. *J Dent Indones.* 2012, 2(19), 43–46
29. Setiabudi, A.; Hardian, R.; Muzakir. A.: Karakterisasi Material: Prinsip dan Aplikasinya Dalam Penelitian Kimia. 2012. Bandung: UPI PRESS
30. Abdullah, M.; Khairurrijal, K.: Review: Karakterisasi Nanomaterial. *J Nano Saintek.* 2009, 2(1), 1-9
31. Gerwert, K.; Kotting, C.: Fourier Transform Infrared (FTIR) Spectroscopy. *Encycl Life Sci.* 2016, 9(2), 6-14
32. Silviyah, S.; Widodo, C.; Masruroh.: Penggunaan Metode FT-IR (Fourier Transform Infra Red) untuk Mengidentifikasi Gugus Fungsi pada Proses Pembaluran Penderita Mioma. *J Fis FMIPA Univ Brawijaya*. Published online 2014, 1-28
33. Shojai, M.; Atai, M.; Nodehi, A.: Design of Experiments (DOE) for the optimization of Hydrothermal Synthesis of Hydroxyapatite Nanoparticles. *Journal of Brazil Chemical Society*. 2011, 123, 2196-2203
34. Schille, R.; Weiss, C, K.; Geserick, J.; Landfester, K.: Phase Stability and Photocatalytic Activity of Zr-doped Anatase Synthesized in Miniemulsion. *Chem. Materials*. 2010, 21(40), 5088-5098
35. Amer, W.; Abdelouahdi, K.; Ramananarivo, HR.; Zahouly, M.; Fihri, A.: Synthesis of Mesoporous Hydroxyapatite for bone tissue. *Materials Lett.* 2013, 107, 189-193
36. Fumiaki M, Yoshiteru K, Yoko S. Formation and Structure of Zinc-substituted calcium hydroxyapatite. *Mater Res Bull.* 2005;40:209-220.
37. Le Geros R, Le Geros J. Dense Hydroxyapatite. *Adv Ser Ceram.* 1993;1:139-180.

38. Ito, A.; Ojima, K.; Naito, H.; Ichinose, N.; Tateishi, T.: Preparation, Solubility, and Cytocompatibility of Zinc-Releasing Calcium Phosphate Ceramics. *J Biomed.* 2000, 50, 178-183
39. Sinulinnga K, Sirait M, Siregar N, Abdullah H. Synthesis and Characterization of Natural limestone-derived nano-hydroxyapatite (HAp) : a comparison study of different metals doped HAps on antibacterial activity. *RSC Adv.* 2021, 11, 15896-15904.
40. Stanic, V.; Dimitrijevic, S.; Antic-Stankovic, J.; et al.: Synthesis and Characterization and Antimicrobial Activity of Copper and Zinc Hydroxyapatite Nanopowders. *Appl Surf Sci.* 2010 256(20), 6083-6089.43.
41. Promita, B.; Howa, B.; Abhiji, C.; Samit, K, N.: Animal Trial on Zinc Doped Hydroxyapatite : A Case Study. *J Asian Ceram Soc* 2. Published online 2014 44-51.

