## DAFTAR PUSTAKA


1. Courouble M.; Davidson N, Dinesen L.: *Global Wetland Outlook: Special Edition 2021*. (Dudley N, ed.). Ramser; 2021.
2. Suherman D.; Sumawijaya N.: Removing Colour and Organic Content of Peat Water Using Coagulation and Floculoation Method In Basaltic Condition. *J Ris Geol dan Pertamb*. 2013;23(2):127-140.
3. Musli V.; Fretes R de.: Analisis Kesesuaian Parameter Kualitas Air Minum Dalam Kemasan Yang Dijual Di Kota Ambon Dengan Standar Nasional Indonesia (SNI). *J Arika*. 2016;10(1):57-74.
4. Peraturan Pemerintah No 22 Tahun 2021. Peraturan Pemerintah Nomor 22 Tahun 2021 tentang Pedoman Perlindungan dan Pengelolaan Lingkungan Hidup. *Sekr Negara Republik Indones*. 2021;1(078487A):483.
5. Pontoni L.; Roviello V.; Race M,: Supramolecular aggregation of colloidal natural organic matter masks priority pollutants released in water from peat soil. *Environ Res*. 2021;195(October 2020):110761.
6. Alif MF.; Arief S.; Aprillia W.: Peat Water Purification by Hydroxyapatite (HAp) Synthesized from Waste Pensi (Corbicula moltkiana) Shells. *IOP Conf Ser Mater Sci Eng*. 2018;299(1).
7. Mohammad AM.; Salah Eldin TA.; Hassan MA.; El-Anadouli BE.: Efficient treatment of lead-containing wastewater by hydroxyapatite/chitosan nanostructures. *Arab J Chem*. 2017;10(5):683-690.
8. Alif MF.; Arief S.; Yunita.: Penjernihan air gambut dengan hidroksiapatit yang disintesis dari limbah cangkang Langkitang (Faunus ater). *J Ris Kim*. 2017;6(3):40-50.
9. Rostika A.; Akbar N.; Deawati Y.; Evy E.; Trianzar Y.; Putri R.: A novel hydrothermal synthesis of nanohydroxyapatite from eggshell-calcium-oxide precursors. *Heliyon*. 2020;6(1):e03655.
10. Elfiana.; Fuadi A.: Efektivitas Proses AOP Berbasis $H_2O_2$ dalam Menghilangkan Warna Air Gambut Berdasarkan Parameter Konsentrasi Zat Organik. *J Teknol Kim Unimal*. 2016;2(November):45-60.
11. Saidy AR, Zakia.: *Bahan Organik Tanah: Klasifikasi, Fungsi Dan Metode Studi*.; 2018.
12. Zadow R.; Corrine.: The Real Dirt On Humic Subtances. *Maximum Yield*. Published online 2009:40-44.
13. Ermal DAS.; Elystia S.; Aziz Y.: Pemanfaatan Precipitated Calsium Carbonate (PCC) dari Limbah Cangkang Kerang Darah (Anadara Granosa) sebagai Adsorben Pengolahan Air Gambut. *J Online Mhs Fak Tek Univ Riau*. 2016;3(2):1-11.
14. Zulaiha S.; PangoloanSoleman Ritonga.; Ade Novia Maulana.:The utilization of chicken bone activated carbon as an adsorbent and its implementation in chemistry learning. *Chempublish J*. 2019;4(1):9-18.
15. Sazali N.; Harun Z.; Sazali N.: A review on batch and column adsorption of various adsorbent towards the removal of heavy metal. *J Adv Res Fluid Mech Therm Sci*. 2020;67(2):66-88.
16. Darmayanto.; Penggunaaan Serbuk Tulang Ayam sebagai Penurun Intensitas Warna Air Gambut. Published online 2009.
17. Dąbrowski A.: Adsorption - From theory to practice. *Adv Colloid Interface Sci*. 2001;93(1-3):135-224.
18. Kecili R, Hussain CM.: *Mechanism of Adsorption on Nanomaterials*. Elsevier Inc.; 2018.

19. Noviyanti AR.; Haryono RP.; Eddy DR.: Cangkang Telur Ayam sebagai Sumber Kalsium dalam Pembuatan Hidroksiapatit untuk Aplikasi Graft Tulang. *Chim Nat Acta*. 2017;5(3):107-111.
20. Epple M.; Meyer F.; Enax J.: A Critical Review of Modern Concepts for Teeth Whitening. *Dentristy J*. 2019;189(8):182-183.
21. Fadila R.; Fadli A.; Yenti SR.: Sintesis Hidroksiapatit Menggunakan Metode Wet Mechanochemical dengan Variasi Waktu Reaksi dan Rasio Bola Penggiling. *Jom FTEKNIK*. 2019;6(1 Januari s/d Juni 2019):1-6.
22. Haris A.; Fadli A.; Yenti SR.: Sintesis Hidroksiapatit dari Limbah Tulang Sapi menggunakan Metode Presipitasi dengan Variasi Rasio Ca/P dan Konsentrasi H3PO4. *JOM FTEKNIK*. 2016;3(2):1-10.
23. Yelten A.; Yilmaz S.: Various Parameters Affecting the Synthesis of the Hydroxyapatite Powders by the Wet Chemical Precipitation Technique. *Mater Today Proc*. 2016;3(9, Part A):2869-2876.
24. Cahyaningrum SE.; Herdyastuty N.; Devina B.; Supangat D.: Synthesis and Characterization of Hydroxyapatite Powder by Wet Precipitation Method. *IOP Conf Ser Mater Sci Eng*. 2018;299(1).
25. Lourenço RERS.; Linhares AAN.; de Oliveira AV.; da Silva MG.; de Oliveira JG.; Canela MC.: Photodegradation of ethylene by use of TiO2 sol-gel on polypropylene and on glass for application in the postharvest of papaya fruit. *Environ Sci Pollut Res*. 2017;24(7):6047-6054.
26. Pei L.; Tsuzuki T.; Dodd A.; Saunders M.: Synthesis of calcium chlorapatite nanoparticles and nanorods via a mechanically-induced solid-state displacement reaction and subsequent heat treatment. *Ceram Int*. 2017;43(14):11410-11414.
27. Alif MF.; Arief S.; Aprillia W.: A hydrothermal synthesis of natural hydroxyapatite obtained from Corbicula moltkiana freshwater clams shell biowaste. *Mater Lett*. 2018;230:40-43.
28. Rodríguez-Lugo V.; Salinas-Rodríguez E.; Vázquez RA.; Alemán K.; Rivera AL.: Hydroxyapatite synthesis from a starfish and β-tricalcium phosphate using a hydrothermal method. *RSC Adv*. 2017;7(13):7631-7639.
29. McDonald L.; Glasser FP.; Imbabi MS.: A new, carbon-negative precipitated calcium carbonate admixture (PCC-A) for low carbon Portland cements. *Materials (Basel)*. 2019;12(2).
30. Laksono AP.; Lutfia Y.; Siswati ND.: Precipitated Calcium Carbonate ( PCC ) From Blood Clam Shells With Double Decomposition Method. *Semin Nas Soebardjo Brotohardjono*. 2020;16:5-10.
31. Jamarun N.; Arief S.: Pembuatan Precipitated Calcium Carbonate (Pcc) Dari Batu Kapur Dengan Metoda Kaustik Soda. *J Ris Kim*. 2015;1(1):20.
32. Hadiko G.; Han YS.; Fuji M.; Takahashi M.: Synthesis of hollow calcium carbonate particles by the bubble templating method. *Mater Lett*. 2005;59(19):2519-2522.
33. Han YS.; Hadiko G.; Fuji M.; Takahashi M.: Effect of flow rate and CO2 content on the phase and morphology of CaCO3 prepared by bubbling method. *J Cryst Growth*. 2005;276(3-4):541-548.
34. Wang C, He C.; Tong Z, Liu X.; Ren B.; Zeng F.: Combination of adsorption by porous CaCO3 microparticles and encapsulation by polyelectrolyte multilayer films for sustained drug delivery. *Int J Pharm*. 2006;308(1-2):160-167.
35. Han YS.; Hadiko G.; Fuji M.; Takahashi M.: Factors affecting the phase and morphology of CaCO3 prepared by a bubbling method. *J Eur Ceram Soc*. 2006;26(4-5):843-847.

36. Jimoh OA.; Ariffin KS.; Hussin H Bin.; Temitope AE.: Synthesis of precipitated calcium carbonate: a review. *Carbonates and Evaporites*. 2018;33(2):331-346.
37. Wulandari MT.; Hermawan.; Purwanto.: Kajian Emisi Co2 Berdasarkan Penggunaan Energi Rumah Tangga Sebagai Penyebab Pemanasan Global. *Pros Semin Nas Pengelolaan Sumberd Alam dan Lingkung*. 2013;(housing, household energy, CO2 emissions, greenhouse gases, global warming):434-440.
38. Wahyudianto FE.; Nisa'Alfikry SC.; Taufik M.; Upaya Penurunan CO2 Program Konversi Biodiesel PT Pertamina (Persero) DPPU Pattimura, Ambon. *J Ilm Lingkung Kebumian*. 2021;3(1):20.
39. Sundaramurthy S.; Premalatha M.: An Overview of Co2 Mitigation Using Algae Cultivation Technology. *Int J Chem Res*. 2011;3(3):110-117.
40. Callister J.; William D.: *Fundamentals of Materials Science and Engineering: An Integrated Approach*. John Wiley & Sons; 2016.
41. Hakim L.; Nawir DM.: Karakterisasi Struktur Material Pasir Bongkahan Galian Golongan C Dengan Menggunakan X-Ray Difraction (X-RD) Di Kota Palangkaraya. *J Jejaring Mat dan Sains*. 2019;1(1):2686-2658.
42. Utami YS.; Dwijananti P.; Nurbaiti U.: Eksplorasi Unsur-Unsur Limbah Padat Pada Industri Pengecoran Logam Di Desa Pesarean Kecamatan Talang Kabupaten Tegal. *Unnes Phys J*. 2012;1(1).
43. Jamaludin A.; Adiantoro D.: Analisis Kerusakan X-Ray Fluoresence (XRF). *Issn 1979-2409*. 2012;V(09-10):19-28.
44. Shavandi A.; Wilton V.; Bekhit AEDA.: Synthesis of macro and micro porous hydroxyapatite (HA) structure from waste kina (Evechinus chloroticus) shells. *J Taiwan Inst Chem Eng*. 2016;65:437-443.
45. Sulistyani M.; Huda N.: Perbandingan Metode Transmisi dan Reflektansi Pada Pengukuran Polistirena Menggunakan Instrumentasi Spektroskopi Fourier Transform Infra Red. *Indones J Chem Sci*. 2018;7(2):195-198.
46. Siregar C.; Martono S.; Rohman A.: Application of Fourier transform infrared (FTIR) spectroscopy coupled with multivariate calibration for quantitative analysis of curcuminoid in tablet dosage form. *J Appl Pharm Sci*. 2018;8(8):151-156.
47. Septiano AF.; Setyaningsih NE.: Analisis Citra Hasil Scanning Electron Microscopy Energy Dispersive X-Ray ( SEM EDX ) Komposit Resin Timbal dengan Metode Contrast to Noise Ratio ( CNR ). *Indones J Math Nat Sci*. 2021;44(2):81-85.
48. Natural J.: Applying Sem-Edx Techniques To Identifying the Types of Mineral of Jades (Giok) Takengon, Aceh. *J Nat Unsyiah*. 2015;15(2).
49. Arief S.; Alif MF.; Adlan F.: Metode Pembuatan Kalsium Karbonat terpresipitasi dengan memanfaatkan Gas-Buang CO2 Limbah Industri. Published online 2019:19.
50. Zein R.; Chaidir Z.; Fauzia S.; Ramadhani P.; Isotherm and Kinetic Studies on the Adsorption Behavior of Metanil Yellow Dyes onto Modified Shrimp Shell-Polyethylenimine ( SS-PEI ). 2022;8(May):10-22.
51. Afriani F.; Tiandho Y.; Pengaruh Lama Pemanasan Terhadap Karakteristik Kristal Kalsium dari Limbah Cangkang Kerang. 2018;2(2):189-200.
52. Royani A.; Sulistiyono E.; Sufiandi D.: Pengaruh Suhu Kalsinasi Pada Proses Dekomposisi Dolomit. *J Sains Mater Indones*. 2018;18(1):41.
53. Verwilghen C.; Rio S.; Nzihou A.; Gauthier D.; Flamant G.; Sharrock PJ.: Preparation of high specific surface area hydroxyapatite for environmental applications. *J Mater Sci*. 2007;42(15):6062-6066.
54. Scapin MA.; Guilhen SN.; B ME.; Pires CAF.; Pires MAF.: Determination of Ca/P

molar ratio in hydroxyapatite (HA) by X-ray fluorescence technique. *Int Nucl Atl Conf - Ina 2015*. 2015;47(5):8-10.
55. Babos DV.; Costa VC.; Sperança MA.: Pereira-Filho ER. Direct determination of calcium and phosphorus in mineral supplements for cattle by wavelength dispersive X-ray fluorescence (WD-XRF). *Microchem J*. 2018;137:272-276.
56. Raynaud S.; Champion E.; Bernache-Assollant D.; Thomas P.: Calcium phosphate apatites with variable Ca/P atomic ratio I. Synthesis, characterisation and thermal stability of powders. *Biomaterials*. 2002;23(4):1065-1072.
57. Lala S.; Satpati B.; Kar T.; Pradhan SK.: Structural and microstructural characterizations of nanocrystalline hydroxyapatite synthesized by mechanical alloying. *Mater Sci Eng C*. 2013;33(5):2891-2898.
58. Fatimah S.; Ragadhita R.; Husaeni DF Al.; Nandiyanto ABD.: How to Calculate Crystallite Size from X-Ray Diffraction (XRD) using Scherrer Method. *ASEAN J Sci Eng*. 2021;2(1):65-76.
59. Jäger C.; Welzel T.; Meyer-Zaika W.; Epple M.: A solid-state NMR investigation of the structure of nanocrystalline hydroxyapatite. *Magn Reson Chem*. 2006;44(6):573-580.
60. Hariani PL.; Said M.; Salni.: Effect of sintering on the mechanical properties of hydroxyapatite from fish bone (Pangasius Hypophthalmus). *IOP Conf Ser Mater Sci Eng*. 2019;509(1).
61. Indrani DJ.; Soegijono B.; Adi WA.: Trout N. Phase composition and crystallinity of hydroxyapatite with various heat treatment temperatures. *Int J Appl Pharm*. 2017;9(Special Issue 2):87-91.
62. Benatay K.; Lakrat K.; Elansari LL.; Mejdoubi E.: Synthesis of B-type carbonated hydroxyapatite by a new dissolution- precipitation method. *Mater Today Proc*. 2020;31:S83-S88.
63. Newbury DE.; Ritchie NWM.: Is scanning electron microscopy/energy dispersive X-ray spectrometry (SEM/EDS) quantitative? *Scanning*. 2013;35(3):141-168.
64. Purwasasmita BS.; Gultom RS.: Sintesis Dan Karakterisasi Serbuk Hidroksiapatit Skala Sub-Mikron Menggunakan Metode Presipitasi. *J Bionatura*. 2008;10(2):155-167.
65. Smičiklas ID.; Milonjić SK.; Pfendt P.; Raičević S.: The point of zero charge and sorption of cadmium (II) and strontium (II) ions on synthetic hydroxyapatite. *Sep Purif Technol*. 2000;18(3):185-194.
66. Wei W.; Yang L.; Zhong W.; Cui J.; Wei Z.: Mechanism of enhanced humic acid removal from aqueous solution using poorly crystalline hydroxyapatite nanoparticles. *Dig J Nanomater Biostructures*. 2015;10(2):663-680.
67. Purmalis O.; Klavins M.: Comparative study of peat humic acids by using UV spectroscopy. *1st Annu Int Interdiscip Conf*. Published online 2013:1-10.
68. Morán Vieyra FE.; Palazzi VI.; Sanchez de Pinto MI.; Borsarelli CD.: Combined UV-Vis absorbansice and fluorescence properties of extracted humic substances-like for characterization of composting evolution of domestic solid wastes. *Geoderma*. 2009;151(3-4):61-67.
69. Glatzel S.; Kalbitz K.; Dalva M.; Moore T.: Dissolved organic matter properties and their relationship to carbon dioxide efflux from restored peat bogs. *Geoderma*. 2003;113(3-4):397-411.
70. Uyguner CS.; Bekbolet M.: Evaluation of humic acid photocatalytic degradation by UV-vis and fluorescence spectroscopy. *Catal Today*. 2005;101(3-4 SPEC. ISS.):267-274.
71. Albrecht R,; Le Petit J.; Terrom G.; Périssol C.: Comparison between UV spectroscopy and nirs to assess humification process during sewage sludge and green wastes co-composting. *Bioresour Technol*. 2011;102(6):4495-4500.

72. Stevenson FJ.: *Humus Chemistry: Genesis, Composition, Reactions*. John Wiley & Sons; 1994.
73. Utama PS.; Olivia M.; Prawiranegara BA.: Peat water treatment by adsorption using kaolin-based geopolymer. *IOP Conf Ser Mater Sci Eng*. 2020;845(1).
74. Jiang L.; Li Y.; Shao Y.: Enhanced removal of humic acid from aqueous solution by novel stabilized nano-amorphous calcium phosphate: Behaviors and mechanisms. *Appl Surf Sci*. 2018;427:965-975.
75. Islam MA.; Morton DW.; Johnson BB.; Angove MJ.: Adsorption of humic and fulvic acids onto a range of adsorbents in aqueous systems, and their effect on the adsorption of other species: A review. *Sep Purif Technol*. 2020;247.
76. Heiberger RM.;Neuwirth E.: One-Way ANOVA BT - R Through Excel: A Spreadsheet Interface for Statistics, Data Analysis, and Graphics. In: Heiberger RM, Neuwirth E, eds. Springer New York; 2009:165-191.
77. Zulfikar MA.; Setiyanto H.: Effect of temperature on adsorption of humic acid from peat water onto pyrophyllite. *Int J Chem Environ Biol Sci*. 2013;1:88-90.
78. Wan Ngah WS.; Hanafiah MAKM.; Yong SS.: Adsorption of humic acid from aqueous solutions on crosslinked chitosan-epichlorohydrin beads: Kinetics and isotherm studies. *Colloids Surfaces B Biointerfaces*. 2008;65(1):18-24.