

DAFTAR PUSTAKA

- Akan, Z. (2015). Boron neutron capture therapy for breast cancer. In *International Journal of Women's Health and Reproduction Sciences* (Vol. 3, Issue 2, p. 77). Aras Part Medical International Press.
- Alard, J. P., Bodez, V., Tchirkov, A., Nénot, M. L., Arnold, J., Crespín, S., Rapp, M., Verrelle, P., & Dionet, C. (2002). Simulation of neutron interactions at the single-cell level. *Radiation Research*, 158(5), 650–656.
- Anderson, I. S., Andreani, C., Carpenter, J. M., Festa, G., Gorini, G., Loong, C. K., & Senesi, R. (2016). Research opportunities with compact accelerator-driven neutron sources. In *Physics Reports* (Vol. 654, pp. 1–58). Elsevier B.V.
- Arrozaqi, M. I. M. (2013). *Perancangan kolimator di beam port tembus reaktor kartini untuk boron neutron capture therapy*. Universitas Gadjah Mada.
- Bardies, M., & Pihet, P. (2005). Dosimetry and Microdosimetry of Targeted Radiotherapy. *Current Pharmaceutical Design*, 6(14), 1469–1502.
- Barth, R. F., Zhang, Z., & Liu, T. (2018). A realistic appraisal of boron neutron capture therapy as a cancer treatment modality. *Cancer Communications*, 38(1).
- Bavarnegin, E., Kasesaz, Y., & Wagner, F. M. (2017). Neutron beams implemented at nuclear research reactors for BNCT. *Journal of Instrumentation*, 12(05), P05005–P05005.
- CNSC. (2012). *Introduction to dosimetry*. Canadian Nuclear Safety Commission.
- Fantidis, J. G., Saitioti, E., Bandekas, D. V., & Vordos, N. (2013). Fantidis et al. / Optimised BNCT facility based on a compact D-D neutron generator. *International Journal of Radiation Research*, 11(4), 207–214.
- Fauziah, N., Harto, A. W., & Sardjono, Y. (2013). A Conceptual Design of Neutron Collimator in the Thermal Column of Kartini Research Reactor for In Vitro and In Vivo Test of Boron Neutron Capture Therapy. *Jurnal Teknologi Reaktor Nuklir*, 15(2), 112–119.
- Fazdilah, S. N. (2018). *Analisis Dosis Boron Neutron Capture Therapy (BNCT) pada Kanker Kulit Melanoma Menggunakan Particle and Heavy Ion Transport Code System (PHITS)* [Skripsi]. Universitas Negeri Yogyakarta.
- Fukunaga, H., & Omura, M. (2020). *Implications of radiation microdosimetry for accelerator-based boron neutron capture therapy: a radiobiological perspective*.
- Hall, E. J., & Giaccia, A. J. (2019). *Radiobiology For The Radiologist: Eight Edition* (8th ed.). Wolters Kluwer.
- Hattori, Y., Andoh, T., Kawabata, S., Hu, N., Michiue, H., Nakamura, H., Nomoto, T., Suzuki, M., Takata, T., Tanaka, H., Watanabe, T., & Ono, K. (2023).

- Proposal of recommended experimental protocols for in vitro and in vivo evaluation methods of boron agents for neutron capture therapy. In *Journal of Radiation Research* (Vol. 64, Issue 6, pp. 859–869). Oxford University Press.
- He, H., Li, J., Jiang, P., Tian, S., Wang, H., Fan, R., Liu, J., Yang, Y., Liu, Z., & Wang, J. (2021). The basis and advances in clinical application of boron neutron capture therapy. In *Radiation Oncology* (Vol. 16, Issue 1). BioMed Central Ltd.
- Hsu, F. Y., Hsiao, H. W., Tung, C.-J., Liu, H. M., & Chou, F. I. (2009). Microdosimetry study of THOR BNCT beam using tissue equivalent proportional counter. *Applied Radiation and Isotopes*, 67(7–8), S175–S178.
- Hu, N., Tanaka, H., Takata, T., Okazaki, K., Uchida, R., & Sakurai, Y. (2020). Microdosimetric quantities of an accelerator-based neutron source used for boron neutron capture therapy measured using a gas-filled proportional counter. *Journal of Radiation Research*, 61(2), 214–220.
- Huang, J. (2009). *Boron Neutron Capture Therapy for Cancer Treatments*. University of Surrey.
- IAEA. (2001). *Current status of neutron capture therapy*.
- ICRU. (1989). *ICRU Report 44, Tissue Substitutes in Radiation Dosimetry and Measurement*.
- Jalut, L. L. S., Rupiasih, N. N., & Sardjono, Y. (2020). Analysis Dosage of Boron in BNCT with Simulation Method Using PHITS (Particle and Heavy Ion Transport Code System) Program. *BULETIN FISIKA*, 21(1), 1.
- Jiang, X., Li, H., Xie, J., McKinley, E. T., Zhao, P., Gore, J. C., & Xu, J. (2017). In vivo imaging of cancer cell size and cellularity using temporal diffusion spectroscopy. *Magnetic Resonance in Medicine*, 78(1), 156–164.
- JSNCT. (2018). *What is BNCT?* [Http://Www.Jsnct.Jp/e/About_nct/](http://www.jsnct.jp/e/About_nct/).
- Kettenbach, K., Schieferstein, H., Grunewald, C., Iffland, D., Reffert, L. M., Hampel, G., Schütz, C. L., Bings, N. H., & Ross, T. L. (2015). Synthesis and evaluation of boron folates for Boron-Neutron-Capture-Therapy (BNCT). *Radiochimica Acta*, 103(11), 799–809.
- Malouff, T. D., Seneviratne, D. S., Ebner, D. K., Stross, W. C., Waddle, M. R., Trifiletti, D. M., & Krishnan, S. (2021). Boron Neutron Capture Therapy: A Review of Clinical Applications. In *Frontiers in Oncology* (Vol. 11). Frontiers Media S.A.
- Moss, R. L. (2014). Critical review, with an optimistic outlook, on Boron Neutron Capture Therapy (BNCT). *Applied Radiation and Isotopes*, 88, 2–11.
- Mu'alim, M., Harto, A. W., & Sardjono, Y. (2019). Monte Carlo N Particle Extended (MCNPX) Radiation Shield Modelling on Boron Neutron Capture

- Therapy Facility Using D-D Neutron Generator 2.4 MeV. In *Indonesian Journal of Physics and Nuclear Application* (Vol. 4, Issue 2).
- Mukawa, T., Matsumoto, T., & Niita, K. (2011). Study on Microdosimetry for Boron Neutron Capture Therapy. In *Progress in NUCLEAR SCIENCE and TECHNOLOGY* (Vol. 2).
- Murshed, H. (2019). *Fundamentals of radiation oncology (Third edition)*. Elsevier Inc.
- Nedunchezian, K., Aswath, N., Thiruppathy, M., & Thirugnanamurthy, S. (2016). Boron neutron capture therapy - a literature review. In *Journal of Clinical and Diagnostic Research* (Vol. 10, Issue 12, pp. ZE01–ZE04). Journal of Clinical and Diagnostic Research.
- Ono, K., Masunaga, S.-I., Suzuki, M., Kinashi, Y., Takagaki, M., & Akaboshi, M. (1999). *THE COMBINED EFFECT OF BORONOPHENYLALANINE AND BOROCAPTATE IN BORON NEUTRON CAPTURE THERAPY FOR SCCVII TUMORS IN MICE*.
- Podgorsak, E. B. (2006). *Radiation Physics for Medical Physicists* (Vol. 1). Springer.
- Rasouli, F. S., & Masoudi, S. F. (2015). A study on the optimum fast neutron flux for Boron Neutron Capture Therapy of deep-seated tumors. *Applied Radiation and Isotopes*, 96, 45–51.
- Regina, M. (2024). *Pemodelan dan Perhitungan Parameter Mikrodosimetri Boron Neutron Capture Therapy (BNCT) pada Single dan Multi Cell Menggunakan Program PHITS*. Universitas Jenderal Soedirman.
- Rossi, H. H. (1968). MICROSCOPIC ENERGY DISTRIBUTION IN IRRADIATED MATTER. In *Fundamentals* (pp. 43–92). Elsevier.
- Sardjono, Y., Harto, A. W., Arrozi, M. I. M., Irhas, S. B., & Tanthawi, H. (2015). *Pengantar Monte Carlo N Particle Dasar-dasar perancangan fasilitas Boron Neutron-capture Cancer Therapy*. Jogja Bangkit Publisher.
- Sato, T., Iwamoto, Y., Hashimoto, S., Ogawa, T., Furuta, T., Abe, S. ichiro, Kai, T., Tsai, P. E., Matsuda, N., Iwase, H., Shigyo, N., Sihver, L., & Niita, K. (2018). Features of Particle and Heavy Ion Transport code System (PHITS) version 3.02. *Journal of Nuclear Science and Technology*, 55(6), 684–690.
- Sato, T., Iwamoto, Y., Hashimoto, S., Ogawa, T., Furuta, T., Abe, S., & Kai, T. (2024). *User's Manual Ver. 3.34*.
- Sato, T., Niita, K., Matsuda, N., Hashimoto, S., Iwamoto, Y., Furuta, T., Noda, S., Ogawa, T., Iwase, H., Nakashima, H., Fukahori, T., Okumura, K., Kai, T., Chiba, S., & Sihver, L. (2014). Overview of Particle and Heavy Ion Transport Code System PHITS. In D. Caruge, C. Calvin, C. M. Diop, F. Malvagi, & J.-C. Trama (Eds.), *SNA + MC 2013 - Joint International Conference on*

- Supercomputing in Nuclear Applications + Monte Carlo* (p. 06018). EDP Sciences.
- Sauerwein, W. A. G. (2012). *Neutron Capture Therapy* (W. Sauerwein, A. Wittig, R. Moss, & Y. Nakagawa, Eds.). Springer Berlin Heidelberg.
- Sauerwein, W. A. G. ., & Moss, R. L. . (2009). *Requirements for boron neutron capture therapy (BNCT) at a nuclear research reactor*. Publications Office.
- Sauerwein, W. A. G., Bet, P. M., & Wittig, A. (2012). Drugs for BNCT: BSH and BPA. In *Neutron Capture Therapy* (pp. 117–160). Springer Berlin Heidelberg.
- Seltzer, & Stephen, M. (2011). International Commission on Radiation Units and Measurements “Report 85: Fundamental Quantities and Units for Ionizing Radiation.” *Journal of the International Commission on Radiation Units and Measurements (Revised Ed.)*, 11(1), 1–31.
- Shiiba, T., Kuga, N., Kuroiwa, Y., & Sato, T. (2017). Evaluation of the accuracy of mono-energetic electron and beta-emitting isotope dose-point kernels using particle and heavy ion transport code system: PHITS. *Applied Radiation and Isotopes*, 128, 199–203.
- Streitmatter, S. W., Stewart, R. D., Moffitt, G., & Jevremovic, T. (2020). Mechanistic modeling of the relative biological effectiveness of boron neutron capture therapy. *Cells*, 9(10), 1–23.
- Suzuki, M., Kato, I., Aihara, T., Hiratsuka, J., Yoshimura, K., Niimi, M., Kimura, Y., Ariyoshi, Y., Haginomori, S. -i., Sakurai, Y., Kinashi, Y., Masunaga, S. -i., Fukushima, M., Ono, K., & Maruhashi, A. (2014). Boron neutron capture therapy outcomes for advanced or recurrent head and neck cancer. *Journal of Radiation Research*, 55(1), 146–153.
- Tsuruoka, C., Suzuki, M., Kanai, T., & Fujitaka, K. (2005). LET and Ion Species Dependence for Cell Killing in Normal Human Skin Fibroblasts. *Radiation Research*, 163(5), 494–500.
- WHO. (2024, December 15). *Cancer*.
- Yokoyama, K., Miyatake, S. I., Kajimoto, Y., Kawabata, S., Doi, A., Yoshida, T., Asano, T., Kirihata, M., Ono, K., & Kuroiwa, T. (2006). Pharmacokinetic study of BSH and BPA in simultaneous use for BNCT. *Journal of Neuro-Oncology*, 78(3), 227–232.
- Zarma SF, Mirea DA, Buscă I, Poroschianu MN, & Verga N. (2014). IMPLEMENTING BNCT THROUGH THE USE OF AN ELECTRON ACCELERATOR *. In *Romanian Reports in Physics* (Vol. 66, Issue 1).