SHORT CV

Asst.Prof.Dr. Jakrapong Kaewkhao received Ph.D. degree in physics from King Mongkut's University of Technology Thonburi (KMUTT), Thailand, in 2008. He attended a post-doctoral short course research of an X-rays induced luminescence study in glasses, supervised by Prof. HongJoo Kim, at KyungPook National University (KNU), Korea, in 2012. In the same year, he has been awarded as the best alumni of Silpakorn University, Thailand. Through his academic career, his research interests involve glass scintillators, photonic glasses, color glasses, radiation shielding glasses (gamma and neutron), gemstone enhancements, and imitation jewelry from glasses. His research on imitation jewelry from glasses has been awarded by several national organizations, e.g., Thailand Research Fund (TRF), National Innovation Agency (NIA), The Science Society of Thailand (SST), and National Research Council of Thailand (NRCT). His recent work focuses on the development of imitation of color-changed gemstone for ornament products, and has recently been awarded by National Research Council of Thailand (NRCT) in 2015. This project has also been awarded the Best Innovation Awards by the 43rd International Exhibition of Innovation of Geneva, Switzerland, and the Medaille D'Argent Silver Medal Silbermadaille in 2015.

Currently, he is director of the Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University (NPRU), Thailand. He has handled more than 55 research projects in glass science and technology, radiation physics, and gemstone enhancements. He has published 321 journals and conference proceeding **(**133 papers published in international journals, 360 citations and H-index = 10). He has also been a reviewer of 16 international journals, and a member of the international radiation physics society (IRPS). He has frequently been the keynoted/invited speaker in many international conferences on physics and related topics in different countries, e.g., Thailand, Korea, India, Laos, and Indonesia. In 2014, he was also a visiting professor at Radiation Science Research Institute, KyungPook National University, Korea, at Institut Teknologi Sepuluh Nopember, Indonesia, and at Sri Venkateswara University, India. Apart from his academic involvements, he is currently a consultant for color glass production and gemstone enhancements in glass and jewelry businesses.

Selected Publications (SCI Journal)

1. **Kaewkhao J.,** Laopaiboon J. and Chewpraditkul W., **2008,** "Determination of Effective Atomic Numbers and Effective Electron Densities for Cu/Zn Alloy" **Journal of Quantitative Spectroscopy and Radiative Transfer**,109(7), pp.1260-1265.
2. **Kaewkhao, J.**, Udomkan, N., Chewpraditkul, W. and Limsuwan, P., **2009**, Effect of excess bismuth on the synthesis of bismuth silicate ($Bi_4Si_3O_{12}$) Polycrystals, **International Journal of Modern Physics B (IJMPB)**, Vol. 23(8), pp. 2093-2099.

3. Kirdsiri, K., **Kaewkhao, J.**, Pokaipisit, A., Chewpraditkul, W. and Limsuwan P., **2009**, Gamma-rays shielding properties of xPbO:(100-x)B_2O_3 glasses system at 662 keV, **Annals of Nuclear energy**, Vol. 36 (9), pp. 1360-1365.
4. **Kaewkhao, J.**, Pokaipisit, A. and Limsuwan, P., **2010**, Study on borate glass system containing with Bi_2O_3 and BaO for gamma-rays shielding materials: comparison with PbO, **Journal of Nuclear Materials**, Vol. 399 (1), pp. 38-40.
5. Chimalawong, P., **Kaewkhao, J.**, Kedkaew, C. and Limsuwan, P., **2010**, Optical and electronic polarizability investigation of Nd^{3+} doped soda-lime-silicate glasses, **Journal of Physics and Chemistry of Solids**, Vol. 71(7), pp. 965-970.
6. Limkitjaroenporn, P., **Kaewkhao, J.**, Limsuwan, P. and Chewpraditkul, W, **2010**, Nonproportionality of electron respond using CCT: plastic scintillator, **Applied Radiation and Isotope**, Vol. 68, pp. 1780-1784.
7. **Kaewkhao, J.**, and Limsuwan, P., **2010**, Mass attenuation coefficients and effective atomic numbers in phosphate glass containing Bi_2O_3, PbO and BaO at 662 keV, **Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment**, Vol. 619, pp. 295-297.
8. Limkitjaroenporn, P., **Kaewkhao, J.**, Limsuwan, P. and Chewpraditkul, W, **2011**, Physical, optical, structural and gamma-ray shielding properties of lead sodium borate glasses, **Journal of Physics and Chemistry of Solids**, Vol. 72(4), pp. 245-251.
9. Park, J.M., Kim, H.J., Kim, S., Cheon, J.K., **Kaewkhao, J.**, Limsuwan, P. and Insiripong., S., **2011**, X-ray and proton luminescence of bismuth-borate glasses, **Journal of Korean Physical Society**, Vol. 59(2), pp. 657-660.
10. **Kaewkhao, J.**, Kirdsiri, K., Limkitjaroenporn, P., Limsuwan, P., Park, J.M. and Kim, H.J., **2011**, Interaction of 662 keV gamma-rays on bismuth based glass matrices, **Journal of Korean Physical Society**, Vol. 59(2), pp. 661-665.
11. Kirdsiri, K., **Kaewkhao, J**., Chanthima, N. and Limsuwan P., 2011, "Comparative Study of Silicate Glass of Bi_2O_3, PbO and BaO Containing: Radiation Shielding and Optical Properties" **Annals of Nuclear energy,** 38, pp. 1438-1441.
12. Chanthima, N., **Kaewkhao, J.** and Limsuwan, P., **2012**, Study of photon interactions and shielding properties of silicate glasses containing Bi_2O_3, BaO and PbO in the energy region of 1 keV to 100 GeV, **Annals of Nuclear energy**, Vol. 41, pp. 119-124.
13. Tuscharoen, S., **Kaewkhao, J.**, Limkitjaroenporn, P., Chewpraditkul, W. and Limsuwan, P., **2012**, Improvement of $BaO:B_2O_3$:fly ash glasses: Radiation shielding, physical and optical properties, **Annals of Nuclear energy**, Vol. 49, pp. 109-113.
14. Park, J.M., Kim, H.J., Limsuwan, P. and **Kaewkhao, J.**, **2012**, Luminescence property of rare-earth-doped bismuth-borate glasses with different concentrations of bismuth and rare-earth material, **Journal of Korean Physical Society**, Vol. 61(2), pp. 248-253.
15. Kaewwiset, W., Thamaphat, K., **Kaewkhao, J.** and Limsuwan, P., **2013**, ESR and spectral studies of Er^{3+} ions in soda-lime silicate glass, **Physica B**, Vol. 409(15), pp. 24 - 29.
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17. Chanthima, N. and **Kaewkhao, J.,** 2013, "Investigation on Radiation Shielding Parameters of Bismuth Borosilicate Glass from 1 keV to 100 GeV" **Annals of Nuclear energy,** 55, pp.23-28.
18. Yasaka, P., Pattanaboonmee, N., Kim, H.J., Limkitjaroenporn, P. and **Kaewkhao, J.**, **2014**, Gamma radiation shielding and optical properties measurements of zinc bismuth borate glasses, **Annals of Nuclear energy**, Vol. 68, pp. 4-9.
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20. Ruamnikhom, R., Limsuwan, P., Horprathum, M., Chanthima, N., Kim, H.J., Ruengsri, S., and **Kaewkhao, J.,** 2014, Up and down-conversion luminescence properties of Nd^{3+} ions doped in Bi_2O_3-BaO-B_2O_3 glass system, **Advances in Materials Science and Engineering,** pp. 1-5. (ID 751953)

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23. Kaewjang, S., Maghanemi, U., Kothan, S., Kim, H.J., Limkitjaroenporn, P., and **Kaewkhao, J.,** 2014, "New Gadolinium Based Glasses for Gamma-Rays Shielding Materials", **Nuclear Engineering and Design**, 280, pp. 21-26.
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25. **Kaewkhao. J.,** Boonin, K., Yasaka, P. and Kim, H.J., 2015, "Optical and luminescence characteristics of Eu^{3+} doped zinc bismuth borate (ZBB) glasses for red emitting device", **Materials Research Bulletin**, 71, pp. 37-41.
26. Kaewnuam, E., Kim, H.J., Jayasankar, C.K., Chanthima, N. and **Kaewkhao. J.,** 2016, "The Photoluminescence, optical and physical properties of Sm^{3+}-doped lithium yttrium borate glasses", **Physics and Chemistry of Glasses: European Journal of Glass Science and Technology Part B** (Accepted manuscript)
27. Singh, V.P., Badiger, N.M., Kothan, S., Kaewjang, S, Korkut, T., Kim, H.J. and **Kaewkhao, J.**, 2016, **"Gamma-Ray and Neutron Shielding Efficiency of Pb-free Gadolinium Based Glasses"** Nuclear Science and Techniques (Accepted manuscript)
28. Park, J.M., Ha, D.H., Kaewjeang, S, Maghanem, U., Kothan, S., **Kaewhkao, J.** and Kim, H.J., 2016 **"Luminescence Properties of Ce^{3+} doped Gadolinium-Calcium-Silicaborate Glass Scintillator",** Radiation Measurement (Accepted manuscript)