

## ตำแหน่งทางวิชาการ - ชื่อ-นามสกุล นายสมบุญ สหสิทธิวัฒน์

### ประวัติการศึกษา

- พ.ศ. 2542 - พ.ศ. 2545      ปริญญาเอก สาขา Macromolecular Science จาก Case Western Reserve University ประเทศสหรัฐอเมริกา
- พ.ศ. 2539 - พ.ศ. 2542      ปริญญาโท สาขา Macromolecular Science จาก Case Western Reserve University ประเทศสหรัฐอเมริกา
- พ.ศ. 2532 - พ.ศ. 2536      ปริญญาตรี สาขาเคมี จากมหาวิทยาลัยขอนแก่น

### ประวัติการทำงาน

- พ.ศ. สิงหาคม 2566 – ปัจจุบัน      รองผู้อำนวยการสำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ  
สายงานบริหารการวิจัยและพัฒนา
- พ.ศ. 2565 - พ.ศ. 2566      ผู้ช่วยผู้อำนวยการสำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ ด้านโครงสร้างพื้นฐาน
- พ.ศ. 2559 - พ.ศ. 2563      หัวหน้าทีมวิจัยพอลิเมอร์ฟิสิกส์ ศูนย์เทคโนโลยีโลหะและวัสดุแห่งชาติ
- พ.ศ. 2556 - พ.ศ. 2565      นักวิจัยอาวุโส (นักวิจัย 3) ศูนย์เทคโนโลยีโลหะและวัสดุแห่งชาติ
- พ.ศ. 2550 - พ.ศ. 2555      นักวิจัยอาวุโส (นักวิจัย 2) ศูนย์เทคโนโลยีโลหะและวัสดุแห่งชาติ
- พ.ศ. 2545 - พ.ศ. 2550      นักวิจัย ศูนย์เทคโนโลยีโลหะและวัสดุแห่งชาติ

### ผลงานด้านวิชาการ/งานวิจัย

#### ผลงานตีพิมพ์

1. K. Srisawad, P. Kanjanaboos, P. Wilairat, S. Sahasithiwat, and P. Pakawatpanurut, “Enhanced electroluminescence of cesium lead bromide light-emitting diode driven by ion migration via surface passivation with organic halide surfactants”, Surf. Interfaces (2022) 30, 101853.
2. S. Jiajaroen, W. Dungkaew, F. Kielar, M. Sukwattanasinitt, S. Sahasithiwat, H. Zenno, S. Hayami, M. Azam, S. I. Al-Resayes, and K. Chainok, “Four series of lanthanide coordination polymers based on the tetrabromobenzene-1,4-dicarboxylate ligand: structural diversity and multifunctional properties”, Dalton Trans. (2022) 51, 7420.
3. A. Naikaew, P. Kumnorkaew, W. Wattanathana, K. Z. Swe, P. Pansa-Ngat, K. Amratisha, H. Nakajima, R. Supruangnet, T. Krajangsang, K. Sinthiptharakoon, S. Sahasithiwat, K. Kanjanaboos, “Investigation of Double-Layered Pb-Sn Perovskite Absorbers: Formation, Structure, Band Alignment, and Stability”, J. Phys. Chem. C (2022) 126, 1623.
4. A. Petdum, N. Kaewnok, W. Panchan, A. Charoenpanich, J. Sirirak,

- S. Sahasithiwat, T. Sooksimuang, and N. Wanichacheva, "Novel rapid "turn on" tetrahydro-[5]helicene-based fluorescence sensor for selective detection of Cd<sup>2+</sup> with a remarkable large Stokes shift and its applications in food samples and living cell", *J. Photochem. Photobiol. A* (2022) 423, 113578.
5. A. Petdum, N. Kaewnok, W. Panchan, S. Sahasithiwat, T. Sooksimuang, J. Sirirak, D. Chaiyavejj, and N. Wanichacheva, "New aza[5]helicene derivative for selective Fe(III) fluorescence sensing in aqueous media and its application in water samples", *J. Mol. Struct.* (2021) 1245, 131250.
6. R. Charlermroj, S. Phuengwas, M. Makornwattana, T. Sooksimuang, S. Sahasithiwat, W. Panchan, W. Sukbangnop, C. T. Elliott, N. Karoonuthaisiri, "Development of a microarray lateral flow strip test using a luminescent organic compound for multiplex detection of five mycotoxins", *Talanta* (2021) 233, 122540.
7. N. Kaewnok, J. Sirirak, S. Jungsuttiwong, Y. Wongnongwa, A. Kamkaew, A. Petdum, W. Panchan, S. Sahasithiwat, T. Sooksimuang, A. Charoenpanich, and N. Wanichacheva, "Detection of hazardous mercury ion using [5]helicene-based fluorescence probe with "Turn[ON]" sensing response for practical applications", *J. Hazard. Mater.* (2021) 418, 126242.
8. J. Ponchai, L. Srathongsian, K. Amratisha, C. Boonthum, S. Sahasithiwat, P. Ruankham, and P. Kanjanaboos, "Modified colored semi-transparent perovskite solar cells with enhanced stability", *J. Alloys Compd* (2021) 875, 159781.
9. P. Pansa-Ngat, H. Nakajima, R. Supruangnet, S. Suwanna, P. Pakawatpanurut, S. Sahasithiwat, and P. Kanjanaboos, "Phase Evolution in Lead-Free Cs-Doped FASnI<sub>3</sub>Hybrid Perovskites and Optical Properties", *J. Phys. Chem. C* (2021) 125, 16903.
10. C. Theppitak, F. Kielar, W. Dungkaew, M. Sukwattanasinitt, L. Kangkaew, S. Sahasithiwat, H. Zenno, S. Hayami, and K. Chainok, "The coordination chemistry of benzhydrazide with lanthanide(III) ions: hydrothermal in situ ligand formation, structures, magnetic and photoluminescence sensing properties", *RSC Adv.* (2021) 11, 24709.
11. T. Meethong, P. Damsongsang, K. Ngamchuea, K. Chainok, S. Sahasithiwat, T. Tuntulani, P. Vanalabhpattana, V. Parasuk, P. Thamyingkit, V. P. Hoven, and J. Unruangsri, "Nickel-Based Water-Soluble Metallopolymer for the Electrochemical Hydrogen Evolution Reaction in Neutral-pH Water", *ACS Appl. Polym. Mater.* (2021) 3, 5051.
12. K. Z. Swe, A. Naikaew, P. Kaewurai, P. Pansa-Ngat, S. Sahasithiwat, L. Kangkaew, S. Rugmai, S. Soontaranon, and P. Kanjanaboos, "Layered perovskite with compact morphology and reduced grain size via vacuum assisted crystallization for luminescence applications", *Opt. Mater. Express* (2020) 10, 1182.

13. S. Kraithong, W. Panchan, A. Charoenpanich, J. Sirirak, S. Sahasithiwat, P. Swanglap, V. Promarak, P. Thamyongkit, and N. Wanichacheva, "A method to detect Hg<sup>2+</sup> in vegetable via a "Turn-On" Hg<sup>2+</sup> - Fluorescent sensor with a nanomolar sensitivity", *J. Photoch. Photobio. A* (2020) 389, 112224.
14. K. Pinsuwan, C. Boonthum, T. Supasai, S. Sahasithiwat, P. Kumnorkaew, and P. Kanjanaboos, "Solar perovskite thin films with enhanced mechanical, thermal, UV, and moisture stability via vacuum-assisted deposition", *J Mater Sci* (2020) 55, 3484.
15. W. Boonta, C. Talodthaisong, S. Sattayaporn, C. Chaicham, A. Chaicham, S. Sahasithiwat, L. Kangkaew, and S. Kulchat, "The synthesis of nitrogen and sulfur co-doped graphene quantum dots for fluorescence detection of cobalt(II) ions in water", *Mater. Chem. Front.* (2020) 4, 507.
16. J. Ponchai, P. Kaewurai, C. Boonthum, K. Pinsuwan, T. Supasai, S. Sahasithiwat, and P. Kanjanaboos, "Modifying morphology and defects of low-dimensional, semi-transparent perovskite thin films via solvent type", *RSC Adv.* (2019) 9, 12047.
17. P. Kaewurai, J. Ponchai, K. Amratisha, A. Naikaew, K. Z. Swe, K. Pinsuwan, C. Boonthum, S. Sahasithiwat, and P. Kanjanaboos, "Enhancing violet photoluminescence of 2D perovskite thin films via swift cation doping and grain size reduction", *Appl. Phys. Express* (2019) 12, 015506.
18. N. Kaewnok, A. Petdum, J. Sirirak, A. Charoenpanich, W. Panchan, S. Sahasithiwat, T. Sooksimuang, and N. Wanichacheva, "Novel Cu<sup>2+</sup> -specific "Turn-ON" fluorescent probe based on [5]helicene with large Stokes shift and its potential application in living cells", *New J. Chem.*, (2018) 42, 5540-7.
19. S. Sahasithiwat, T. Sooksimuang, L. Kangkaew, and W. Panchan, "3,12-Dimethoxy-5,6,9,10-tetrahydro-7,8-dicyano-[5]helicene as a new emitter for blue and white organic light-emitting diode", *Dyes and Pigments*, (2017) 136, 754-760.
20. K. Wongkhan, U. Mahanitipong, M. Srikaew, Y. Tantirungrotchai, S. Sahasithiwat, and R. Jitchati, "Highly efficient blue LECs using charged iridium complexes", *Acta Physica Polonica A*, (2015) 127, 1109-1111.
21. U. Thubsuang, D. Sukanan, S. Sahasithiwat, S. Wongkasemjit, and T. Chaisuwan, "Highly sensitive room temperature organic vapor sensor based on polybenzoxazine-derived carbon aerogel thin film composite", *Materials Science and Engineering B*, (2015) 200, 67-77.
22. T. Sooksimuang, S. Kamtonwong, W. Panchan, L. Kangkaew, and S. Sahasithiwat, "Crystal structure of 3,13-dimethoxy-5,6,10,11-tetrahydrofuro[3,4-i][5]helicene-7,9-dione", *Acta Cryst. E*, (2014) 70, 418-420.
23. S. Sahasithiwat, T. Sooksimuang, S. Kamtonwong, W. Panchan, and L. Kangkaew, "3,12-Dimethoxy-5,6,9,10-tetrahydro-[5]helicene-7,8-dicarbonitrile", *Acta Cryst. E*, (2014) 70, o837.

24. T. Choppawa, M. Sukwattanasinitt, S. Sahasithiwat, V. Ruangpornvisuti, and P. Rashatasakhon, "Substituent effect on quantum efficiency in 4-aryloxy-N-(2',6'-diisopropylphenyl)-1,8-naphthalimides: experimental and computational investigations", *Dyes and Pigments*, (2014) 109, 175-180.
25. A. Chaicham, S. Sahasithiwat, T. Tuntulani, and B. Tomapatanaget, "Highly effective discrimination of catecholamine derivatives via FRET-on/off processes induced by the intermolecular assembly with two fluorescence sensors", *Chem. Commun.*, (2013) 49, 9287-9289.
26. D. Aussawasathien, S. Sahasithiwat, L. Menbangpung, and C. Teerawattananon, "Poly (o-anisidine)-polystyrene composite fibers via electrospinning process: surface morphology and chemical vapor sensing", *Sensors and Actuators B*, (2011) 151, 341-350.
27. S. Sangngern, S. Sahasithiwat, A. Kaewilai, N. Koonsaeng, and A. Laobuthee, "Preparation of chemical vapor sensing materials from composites of esterified poly(vinyl alcohol) and carbon black", *Sensors and Actuators B*, (2011) 156, 961-968.
28. S. Sahasithiwat, T. Mophuang, L. Menbangpung, S. Kamtonwong, and T. Sooksimuang, "3,12-Dimethoxy-7,8-dicyano-[5]helicene as a novel emissive material for organic light-emitting diode", *Synth Metals*, (2010) 160, 1148-152.
29. C. Nerungsi, P. Wanitchang, S. Sahasithiwat, K. Sadorn, T. Kerdcharoen, and T. Thongpanchang, "Organic electroluminescence device based on anthracene sulfide derivatives", *Tetrahedron Letters*, (2010) 51, 6392-6395.
30. D. Aussawasathien, S. Sahasithiwat, and L. Menbangpung, "Electrospun camphorsulfonic acid doped poly(o-toluidine)-polystyrene composite fibers: Chemical vapor sensing", *Synth. Metals*, (2008) 158, 259-263.
31. P. Setasuwon, L. Menbangpung, and S. Sahasithiwat, "Eight combinatorial stacks of three layers of carbon black/PVA#Carbon Black/EVA Composites as a Vapor Detector Array", *J. of Comb. Chem.*, (2008) 10, 959-965.