

SUPPACHAI SATTAYANURAK

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EDUCATION

- **University of Twente** Enschede, the Netherlands
Degree of Doctor 2020
- Prince of Songkla University, Pattani campus Pattani, Thailand
Doctor of Philosophy (Polymer Technology) 2020
Thesis topic: Silica reinforced natural rubber: Shifting tire performance by hybridization with secondary fillers and polymers
This project is supported by Apollo Tyres Global R&D, Enschede, the Netherlands.
- **Chulalongkorn University** Bangkok, Thailand
Master Degree of Science (Petrochemistry and Polymer Science) 2012
Thesis topic: Properties of styrene butadiene rubber compounded with devulcanized waste spew rubber from tire manufacturing
- **Prince of Songkla University, Pattani campus** Pattani, Thailand
Bachelor Degree of Science (Rubber Technology) 2007
Senior project: Preparation of thermoplastic polyolefins based on natural rubber and polypropylene blends

EXPERIENCE

- **National Science and Technology Development Agency (NSTDA)** Pathumthani, Thailand
National Metal and Materials Technology Center (MTEC)
Researcher at Innovative Rubber Manufacturing Research Group (IR)
Tire and Eco Rubber Compounding Research Team (TECT)
- **Bridgestone Asia Pacific Technical Center. Co., Ltd.** Pathumthani, Thailand
Senior Staff of Product and Process Development of tires
- **Thai Bridgestone. Co., Ltd. (Nong Khae Plant)** Saraburi, Thailand
Senior Staff of Compounding
- **RPS Technologies. Co., Ltd.** Pathumthani, Thailand
Product Launch Engineer

PATENT

- S. Sattayanurak, K. Sahakaro, J.W.M. Noordermeer, W. Kaewsakul, L.A.E.M. Reuvekamp, and A. Blume, "Rubber composition for tyres comprising organoclays", German patent application 10 2018 115835.1, June 29, to Apollo Tyres (2018).

PUBLICATION

- **S. Sattayanurak**, J.W.M. Noordermeer, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, and A. Blume, Silica-reinforced natural rubber: synergistic effects by addition of small amounts of secondary fillers to silica-reinforced natural rubber tire tread compounds, *Advances in Materials Science and Engineering*, 2019, Article ID 5891051, 1-8, <https://doi.org/10.1155/2019/5891051>
- **S. Sattayanurak**, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Synergistic effect by high specific surface area carbon black as secondary filler in silica reinforced natural rubber tire tread compounds, *Polymer Testing*, 81, 1-10 (2020), <https://doi.org/10.1016/j.polymertesting.2019.106173>
- **S. Sattayanurak**, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Improvement of silica-reinforced natural rubber tire tread compounds by joint hybridization with small amounts of secondary fillers and polymers, *Rubber Chemistry and Technology*, 93, 652–671 (2020), <https://doi.org/10.5254/rct.20.79962>
- **S. Sattayanurak**, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Enhancing performance of silica-reinforced natural rubber tire tread compounds by applying organoclay as secondary filler, *Rubber Chemistry and Technology*, 94, 121-144 (2021), <https://doi.org/10.5254/rct.20.80373>
- **S. Sattayanurak**, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Elucidating the role of clay-modifier on the properties of silica-and silica/nanoclay-reinforced natural rubber tire compounds, *eXPRESS Polymer Letters*, 17, 666-684 (2021), <https://doi.org/10.3144/expresspolymlett.2021.56>

CONFERENCES

- S. Sattayanurak, K. Sahakaro, W.K. Dierkes, W. Kaewsakul, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Effect of silane coupling agent loading on the properties of silica/carbon black-reinforced natural rubber tire tread compounds, The 8th Polymer Conference of Thailand (PCT-8), Bangkok, Thailand, June 14-15, 2018.
- S. Sattayanurak, K. Sahakaro, J.W.M. Noordermeer, L.A.E.M. Reuvekamp, W. Kaewsakul, and A. Blume, Use of nanoclay and carbon black as secondary fillers in silica-reinforced NR tread compounds, The German Rubber Conference DKT 2018/Deutsche Kautschuk-Tagung, DKT 2018, Nurnberg, Germany, July 2-5, 2018.
- S. Sattayanurak, K. Sahakaro, W.K. Dierkes, W. Kaewsakul, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Synergistic effect by high specific surface area carbon black as secondary filler in silica-reinforced natural rubber tire tread compounds, International Rubber Conference 2018 (IRC 2018), Kuala Lumpur, Malaysia, September 4-6, 2018.
- S. Sattayanurak, J.W.M. Noordermeer, K. Sahakaro, W. Kaewsakul, and A. Blume, Silica-reinforced natural rubber: synergistic effects by addition of small amounts of secondary fillers to silica-reinforced natural rubber tire tread compounds. The 194th Technical Meeting of the Rubber Division, ACS 2018, Louisville, Kentucky, USA, October 9-11, 2018.
- S. Sattayanurak, J.W.M. Noordermeer, K. Sahakaro, W. Kaewsakul, W.K. Dierkes, and A. Blume, Silica-reinforced natural rubber: synergistic effects by addition of small amounts of secondary fillers to silica-reinforced natural rubber tire tread compounds, 13th Fall Rubber Colloquium/13th Kautschuk-Herbst-Kolloquium, Hannover, Germany, November 6-8, 2018.
- S. Sattayanurak, K. Sahakaro, W.K. Dierkes, W. Kaewsakul, L.A.E.M. Reuvekamp, A. Blume, and J.W.M. Noordermeer, Utilization of organoclay as secondary filler in silica-reinforced natural rubber tire tread compounds, The 196th Technical Meeting of the Rubber Division, ACS 2019, Cleveland, Ohio, USA, October 8-10, 2019.

EXPERTISE

- Reinforcement of rubber
- Tire and Eco rubber compounding