

CURRICULUM VITAE

PERSONAL DATA

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EXPERTISE

Ceramics, Glass, Glass-Ceramics, Bioceramics, Dental Ceramics, Cement, Geopolymer

EDUCATION

- Chulalongkorn University, Bangkok, Thailand (1982-1985)

BSc, Materials Science (Ceramics), Department of Materials, Faculty of Science

- University of Leeds, Leeds, UK (1997-2001)

PhD, Materials Science and Engineering (Ceramics), Department of Materials (with Dr. Christopher Hammond) and Leeds Dental Institute (with Prof. David J. Wood)

Published Proceedings

1. D. Chaysuwan, N. Bubb, S. Maskill, C. Hammond, R. Hill and D.J. Wood, (2004), Deveopment of High-Strength Machinable Glass Ceramics for Dental Applications, Glass & Optical Materials Division Fall 2004 Meeting, 7-12 November 2004, Florida, USA
2. Duangrudee Chaysuwan, Wijak Metchanan, Anucha Lert-adipat and Suvimol Sujjavanich, (2004),

- ‘Replacement of Silica Composition in Portland Cement Type I by Bagasse Ash’, Proceedings The First International Conference of Asian Concrete Federation, 28-29 October 2004, Chiangmai Thailand
3. D. Chaysuwan, A. Tansuwan, C. Hammond and D. J. Wood, (2005), Machinable Mica-Based Glass-Ceramics for Dental Applications, 29th International Conference on Advanced Ceramics and Composites, 23-28 January 2005, Florida, USA
4. V. Chobaomsup, S. Sujjavanich and D. Chaysuwan, (2005), ‘Replacement of Type I Portland Cement by Bagasse Ash in Concrete Flooring Tiles’, Proceedings The First Annual Concrete Conference, 25-27 October, 2005, Rayong Resort Thailand
5. D. Chaysuwan, J. Chongsaguan and T. Bumrungvej, (2006), ‘Machinable Glass Ceramics for Dental Applications’, Archives of BioCeramics Research Volume 6, The Sixth Asian BioCeramics Symposium 2006, 7-10 November 2006, Bangkok, Thailand (**Awarded: Best Paper**)
6. D. Chaysuwan, M. Morin and A. Walas, (2007), Microstructural Development of Mica Glass Ceramics Proceeding of ACerS 2007 Glass & Optical Materials Division Meeting & 18th University Conference on Glass, 20-23 May 2007, Double Tree Hotel, Rochester, New York
7. Duangrudee Chaysuwan, Melanie Morin and Alexis Walas, (2007), ‘Development of Microstructures of Ba-mica Glass Ceramics’, Proceedings 24th Annual Conference, The Microscopy Society of Thailand, 14-16 February 2007, Bangkok, Thailand
8. Siripairod H., Polkert S., Sajjavanich S., Chaysuwan D., (2008), ‘Development of Concrete Flooring Tiles by Wastes, Bagasse Ash and Fly Ash, for Replacing Type I Portland Cement’, Proceedings of abstracts The 3rd Asian Concrete Federation International Conference (ACF/VCA-2008) on Sustainable Concrete Technology and Structures in Local Climate and Environment Conditions, 11-13 November 2008, Rex Hotel, Ho Chi Minh City, Vietnam
9. S. Suvimol, C. Duangrudee, (2008), ‘Bagasse ash: Effect of Pozzolanic Activity and Application in Cement Use Aspect’, Proceedings of abstracts of The 3rd Asian Concrete Federation International Conference (ACF/VCA-2008) on Sustainable Concrete Technology and Structures in Local Climate and Environment Conditions, 11-13 November 2008, Rex Hotel, Ho Chi Minh City, Vietnam
10. K. Kaewsupsak, P. Tucksanont, T. Supanaroj, J. Bai, T. Chitwatcharakomol and D. Chaysuwan, (2009), ‘Development of Mica-Based Glass-Ceramics with Fluorapatite Variation for Restorative Dental Applications’, Bioceramics 22, International Symposium on Ceramics in Medicine, The Annual Meeting of the International Society for Ceramics in Medicine (ISCM), 26-29 October 2009, Daegu, Korea

11. Kanungnuch Keawsupsak, Palida Tucksanont, Theerapa Supanaroj, Tepiwan Jitwatcharakomol and Duangrudee Chaysuwan, (2010), 'Effect of Fluorapatite on Chemical Solubility of Glass-Ceramics for Dental Restoration', The Proceedings of 48th Kasetsart University Annual Conference Kasetsart University, 1-4 February, 2010
12. K. Sirinukunwattana, K. Keawsupsak, P. Tucksanont, T. Supannaroj, T. Jitwatcharakomol and D. Chaysuwan, (2010), 'Fluorapatite Effect on Properties of Mica-Based Glass-Ceramics for Restorative Dental Materials', Proceedings 10th Asian BioCeramics Symposium (ABC2010), 2-5 November, 2010, Universitas Gadjah Mada, Yogyakarta, Indonesia
13. Pornpimol Kuntajinda, Tepiwan Jitwatcharakomol, Chana Raksiri and Duangrudee Chaysuwan, (2011), 'Residual Strain Adjustment to Enhance Machinable Glass-Ceramics Forming as a Restorative Dental Material', The Proceeding of 49th Kasetsart University Annual Conference, 1-4 February 2011, Kasetsart University, Bangkok (ISBN 978-616-7522-06-7)
14. Supakit Nontananandh, Kiattikun Thongdaeng, Naphol Yoobanpot, Duangrudee Chaysuwan and Monthon Thanuttamavong, (2011), 'Utilization of Cementing Material from Industrial Wastes to Produce Porous Concrete', The Proceeding of 49th Kasetsart University Annual Conference, 1-4 February 2011, Kasetsart University, Bangkok (ISBN 978-616-7522-06-7)
15. Duangrudee Chaysuwan, Chayanee Tipayasam and Suvimol Sajjavanich, (2011), 'Influence of Different Pozzolan Materials on Properties of Geopolymers', ICMAT 2011 International Conference on Materials for Advanced Technologies (2011), 26 June – 1 July 2011, Singapore
16. Duangrudee Chaysuwan, Piyanut Muangtong, Suvimol Sajjavanich and Sumate Poomiapiiradee, (2012), 'Low Carbon Cement Replacement by Ultrafine Particles of Bagasse Ash', 4th KKU International Engineering Conference 2012 (KKU-IENC 2012), 10-12 May 2012, Khon Kaen, Thailand
(Awarded: Best Presentation)
17. Chayanee Tipayasam and Duangrudee Chaysuwan, (2012), 'Effect of Different Fine Ashes on Compressive Strength of Geopolymers', ICTA 2012: International Conference on Traditional and Advanced Ceramics, 22-25 August 2012, Bangkok, Thailand
18. Duangrudee Chaysuwan, Chayanee Tipayasam, Pimpawee Keawpapasson, Thammarat Panyathanmaporn, Sirithan Jiemsirilars and Cristina Leonelli, (2013), 'Development of Thai Fly Ash Blended with Rice Husk Ash Geopolymers', PACRIM 10: 10th Pacific Rim Conference on Ceramic and Glass Technology, 2-7 June 2013, San Diego, CA, USA

19. Pimpawee Keawpapasson Chayanee Tippayasam, Parjaree Thavorniti, Cristina Leonelli and Duangrudee Chaysuwan, (2013), 'Synthesis of geopolymer by Thai kaolin instead of metakaolin', ECERS 13: 13th International Conference of the European Ceramic Society, 23-27 June 2013, Limoges, France
20. Pimpawee Keawpapasson, Chayanee Tippayasam, Silawat Ruangjan, Parjaree Thavorniti, Thammarat Panyathanmaporn, Alexandre Fontaine Cristina Leonelli and Duangrudee Chaysuwan, (2013), 'Metakaolin-Based Porous Geopolymer with Aluminium Powder', ICTA 2013 : International Conference on Traditional and Advanced Ceramics, 11-13 September 2013, Bangkok, Thailand
21. Praphatsorn Kaewwichit, Jaroon Jansomboon and Duangrudee Chaysuwan, Burning process of clinker for Portland cement by microwave furnace, The 53rd Kasetsart University Annual Conference, 3-6 February, 2015, Bangkok, Thailand
22. Atiya Tancharoen, Jaroon Junsomboon and Duangrudee Chaysuwan, Portland pozzolan cement from agro-industrial waste pozzolan, The 53rd Kasetsart University Annual Conference, 3-6 February, 2015, Bangkok, Thailand
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Published Papers

1. Chayanee Tippayasam, Sansanee Boonsalee, Suvimol Sajjavanich, Chiara Ponzoni, Elie Kamseu and Duangrudee Chaysuwan, (2010), Geopolymer Development by Powders of Metakaolin and Wastes in Thailand, *Advances in Science and Technology* Vol.69, 2010 Online available since 2010/Oct/27 at www.scientific.net ©(2010) Trans Tech Publications, Switzerland (doi:10.4028/www.scientific.net/AST.69.63). (Q3)
2. Duangrudee Chaysuwan, Krongkarn Sirinukunwattana, Kanchana Kanchanatawewat, Greg Heness and Kimihiro Yamashita, (2011), Machinable Glass –Ceramics Forming as a Restorative Dental Material, *Dental Materials Journal*, 30(3):358-367 (doi: 10.4012/dmj.2010-154 JOI JST.JSTAGE/dmj/2010-154). (Q2)
3. Supakij Nontananandh, Naphol Yoobanpot, Duangrudee Chaysuwan and Kiattikun Thongdaeng, (2011), Influence of Fineness of Cement Produced from Industrial Wastes on Strength of Mortar, *Kasetsart Journal: Natural Science*, 045, 4, 762-772 (ISSN: 0075-5192). (Q4)
4. Piyanut Muangtong, Suvimol Sujjavanich, Sansanee Boonsalee, Sumate Poomiapiiradee and Duangrudee Chaysuwan, (2013), Effects of Fine Bagasse Ash on the Workability and Compressive Strength of Mortars, *Chiang Mai Journal of Science*, 40 (1) 126-134. (Q4)
5. Chayanee Tippayasam, Pimpawee Keawpapasson, Parjaree Thavorniti, Thammarat Panyathanmaporn, Cristina Leonelli and Duangrudee Chaysuwan, (2014), Effect of Thai Kaolin on Properties of Agricultural Ash Blended Geopolymers, *Construction and Building Materials*, 53 (2014) 455-459. (IF 2.296) (Q1)
6. Chayanee Tippayasam, Cristina Leonelli and Duangrudee Chaysuwan, (2014), Effect of Agricultural Wastes with Fly Ash on Strength of Geopolymers, *Suranaree Journal of Science and Technology*, 21(1)2014, 1-7
7. Duangrudee Chaysuwan, Chayanee Tippayasam, Pimpawee Keawpapasson, Parjaree Thavorniti, Thammarat Panyathanmaporn, Sirithan Jiemsirilers and Cristina Leonelli, (2014), Development of Thai Fly Ash Blended with Rice Husk Ash Geopolymers, *Design, Development and Applications of Structural Ceramics, Composites and Nanomaterials: Ceramic Transactions*, Vol. 244. (Q4)
8. Pimpawee Keawpapasson, Chayanee Tippayasam, Silawat Ruangjan, Pajaree Thavorniti, Thammarat Panyathanmaporn, Alexandre Fontaine, Cristina Leonelli and Duangrudee Chaysuwan, (2014), Metakaolin-Based Porous Geopolymer with Aluminium Powder, *Key Engineering Materials*, 608 (2014) 132-138. (Q3)

9. BAI Jia and CHAYSUWAN Dauangrudee, (2014), Nucleation, crystallization and characterization of mica-based glass-ceramics with fluorapatite, Advanced Materials Research, 936 (2014) 164-169. (Q3)
10. Bai Jia and Chaysuwan Duangrudee, (2015), Development of Mica-Based Glass-Ceramic with 4 Mol% of Fluorapatite, Advanced Materials Research, 1077 (2015) 8-13. (Q3)
11. Elie Kamseu, Chiara Ponzoni, Chayanee Tippayasam, Rosa Taurino, Duangrudee Chaysuwan, Maria Chiara Bignozzi, Luisa Barbieri and Cristina Leonelli, (2015), Influence of fine aggregates on the microstructure, porosity and chemico-mechanical stability of inorganic polymer concretes, Construction and Building Materials, 96 (Oct 2015) 473-483. (Q1)
12. Chayanee Tippayasam, Pongpob Balyore, Parjaree Thavorniti, Elie Kamseu, Cristina Leonelli, Prinya Chindaprasirt and Duangrudee Chaysuwan, (2014), Potassium Alkali Concentration and Heat Treatment Affected Metakaolin-based Geopolymer, Construction and Building Materials, 104 (Feb 2016) 293-297. (Q1)
13. Elie Kamseu, Chiara Ponzoni, Chayanee Tippayasam, Rosa Taurino, Duangrudee Chaysuwan, Vincenzo M. Sglavo, Parjaree Thavorniti, Cristina Leonelli, (2016), Self-compacting geopolymer concretes: Effects of addition of aluminosilicate-rich fines, Journal of Building Engineering, 5 (Mar 2016) 211-221. (Q3)
14. Phachongkit Boonanunwong, Pimpawee Keawpapasson, Chayanee Tippayasam, Parjaree Thavorniti, Prinya Chindaprasirt, Duangrudee Chaysuwan, (2016), Properties of Geopolymer Paste from Fly Ash Blended with Metakaolin as Pervious Concrete, Key Engineering Materials, 690 (May 2016) 179-186. (Q3)
15. Chayanee Tippayasam, Phachongkit Boonanunwong, Jocelyn Calvez, Parjaree Thavorniti, Prinya Chindaprasirt, and Duangrudee Chaysuwan, (2016), Effect of Porosity and Pore Size on Microstructures and Mechanical Properties of Metakaolin Blended with Ca(OH)_2 and PLA as Porous Geopolymers, Key Engineering Materials, 690 (May 2016) 276-281. (Q3)
16. Thapanee Srichumpong, Kallaya Suputtamongkol, Warat Chinpanuwat, Pronbadin Nampachoke, Jia Bai, Sukanda Angkulpipat, Sahadsaya Prasertwong and Duangrudee Chaysuwan, (2016), Effect of Heat Treatment Time on Properties of Mica-Based Glass-Ceramics for Restorative Dental Materials, Key Engineering Materials, 702 (July 2016) 23-27. (Q3)

Article

- ดวงฤดี ฉายสุวรรณ และ ฐาปนี ศรีชุมพวง, 2558, กลาสเซรามิกชนิดใหม่สำหรับวัสดุบูรณะทางทันตกรรม, เซรามิกส์, สมาคมเซรามิกส์ไทย, มกราคม-เมษายน 2558, 63-71

Patent

- Machinable Glass-Ceramics for Dental Applications, No. of Petty Patent 6416, issued on 8 August 2011, expired on 2 February 2016 (Renewed until 2018)

Award

- Honorable thesis for Miss Piyanut Muangtong, a master degree advisee, (2012), Title: ‘Partial Replacement of Clinker by Agricultural Waste, Bagasse Ash, for Type I Portland Cement Production’ from Graduate School, Kasetsart University, Thailand, 10th Oct. 2013