

Curriculum Vitae



Name: Isarawut Prasertsung, D.Eng.

Date of Birth: January 31, 1980

Nationality: Thai

Religion: Buddhism

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Educations:

March 2011	D.Eng. (Chemical Engineering) Chulalongkorn University, Bangkok, Thailand (The Royal Golden Jubilee Ph.D. Program (RGJ) Scholarship)
October 2006	M.Eng. (Chemical Engineering) Chulalongkorn University, Bangkok, Thailand
April 2003	B.Eng. (Polymer Engineering) Rajamangala University of Technology Thunyaburi Pathumthani, Thailand

Fellowship and award:

2008-2011	The Royal Golden Jubilee Ph.D. Program (RGJ) Thailand Research Fund
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Appointments:

2019-Present	Assistant Professor in Chemical Engineering, Mahasarakham University
2014-2018	Assistant Professor in Chemical Engineering, Naresuan

	University
2011-2014	Lecturer of Chemical Engineering Program, Naresuan University
2008-2011	Study in Ph.D program at Department of Chemical Engineering, Chulalongkorn University
2008-Present	Lecturer of Chemical Engineering Program, Naresuan University

Research interests:

Cellulosic material for reducing sugar production
 Plasma surface treatment of biomaterial
 Solution plasma
 Degradation of chitosan and cellulose
 Biomaterials for medical application

Research experiences:

October 2006- March 2011	Polymer Engineering Laboratory, Department of Chemical Engineering, Chulalongkorn University, Thailand (Under supervision of Prof.Dr.Siriporn Damrongsakkul)
February –May 2009	Plasma Laboratory, Department of Physics, University of Malaya, Malaysia (Under supervision of Prof.Dr.Wong Chiow San)
May –November 2010	Eco-Topia Science Institute & Department of Material Science and Engineering, Nagoya University, Japan (Under supervision of Prof.Dr.Nagahiro Saito)
October –November 2011	Eco-Topia Science Institute & Department of Material Science and Engineering, Nagoya University, Japan (Under guidance of Prof.Dr.Nagahiro Saito)
November –December 2013	Eco-Topia Science Institute & Department of Material Science and Engineering, Nagoya University, Japan (Under guidance of Prof.Dr.Nagahiro Saito)

Patent:

“Preparation process of acellular tissue from mammalian using enzymatic treatment incorporated with periodic pressurized technique” Thai patent pending no. 0801004969

Current Research and Fund

2018-2019	“Liquid phase conversion of glucose and fructose into 5-hydroxymethylfurfural and levulinic acid using solution plasma process” Funded by Thailand Research
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	Fund (TRF Grant for New Researcher) (Fiscal year 2018). [Project Leader]
2015-2016	“Preparation of low molecular weight hyaluronic acid using solution plasma process” Funded by HERP (Fiscal year 2015) [Project Leader]
2015-2017	“Preparation of glucose from cellulose using solution plasma process” Funded by Thailand Research Fund (TRF Grant for New Researcher) (Fiscal year 2015). [Project Leader (Completed)]
2015-2016	“Conversion of starch to glucose using solution plasma process” Funded by Naresuan University (Fiscal year 2015). [Project Leader (Completed)]
2014-2015	“Preparation of chitooligosaccharides using solution plasma process” Funded by Naresuan University (Fiscal year 2014). [Project Leader (Completed)]

International publications:

- 1) **I. Prasertsung**, S. Kaewcharoenl, K. Kunpinit, W. Yaowarat, N. Saito, T. Phenrat “Enhanced Degradation of Methylene Blue by a Solution Plasma Process Catalyzed by Incidentally Co-Generated Copper Nanoparticles” *Water Science and Technology* (Accepted) (2019) (Corresponding author: IF. 1.27, ISI, Q2)
- 2) **I. Prasertsung**, K. Kamwilaisak, N. Saito, S. Damrongsakkul “Production of reducing sugar from cassava starch waste water using solution plasma process (SPP)” *Carbohydrate Polymers* 205: 472-479 (2019) (Corresponding author: IF. 5.158, ISI, Q1)
- 3) **I. Prasertsung**, P. Chutinate, A. Watthanaphanit, N. Saito, S. Damrongsakkul “Conversion of cellulose into reducing sugar by solution plasma process (SPP)” *Carbohydrate Polymers* 172: 230-236 (2017) (Corresponding author: IF. 5.158, ISI, Q1)
- 4) T. Phenrat, P. Teeratitayangkul, **I. Prasertsung**, R. Parichatprecha, P. Jitsangiam, N. Chomchalow, S. Wichai” Vetiver plantlets in aerated system degrade phenol in illegally dumped industrial wastewater by phytochemical and rhizomicrobial degradation” *Environmental Science and Pollution Research*, 24: 13235-13246 (2017) (IF. 2.741, ISI, Q2)
- 5) P. Sahapaibounkit, **I. Prasertsung**, R. Mongkolnavin, and S. Damrongsakkul” A Two-step Method using Air Plasma and Carbodiimide Crosslinking to Enhance the Biocompatibility of Polycaprolactone” *Journal of Biomedical Materials Research: Part B - Applied Biomaterials*, 105B: 1658-1666 (2017) (IF. 3.189, ISI, Q2)

- 6) T. Tantiplapol, Y. Singsawat, N. Narongsil, S. Damrongsakkul, N. Saito, and **I. Prasertsung** “Influences of solution plasma conditions on degradation rate of chitosan” *Innovative Food Science and Emerging Technologies* 32: 116-120 (2015) (Corresponding author: IF. 3.27, ISI, Q1)
- 7) **I. Prasertsung**, S. Damrongsakkul, and N. Saito “Degradation of β -chitosan by solution plasma process” *Polymer Degradation and Stability* 98: 2089-2093 (2013) (Corresponding author: IF. 3.12, ISI, Q1)
- 8) **I. Prasertsung**, S. Kanokpanont, R. Mongkolnavin, C.S. Wong, J. Panpranot, and S. Damrongsakkul. “Comparison of the attachment and growth of L929 Mouse fibroblast and rat bone marrow-derived mesenchymal stem cell on nitrogen plasma-treated gelatin films” *Material Science and Engineering C* 33: 4475-4479 (2013) (IF. 2016 = 4.164, ISI, Q1)
- 9) **I. Prasertsung**, S. Damrongsakkul, and N. Saito “Crosslinking of gelatin solution induced by electrical discharge in solution” *Plasma Process and Polymers* 10: 792-797 (2013) (IF. 3.77, ISI, Q1)
- 10) **I. Prasertsung**, S. Damrongsakkul, C. Terashima, N. Saito, and O. Takai. “Preparation of low molecular weight chitosan using solution plasma system” *Carbohydrate Polymers*, 87: 2745-2749 (2012). (IF. 4.811, ISI, Q1)
- 11) **I. Prasertsung**, S. Kanokpanont, R. Mongkolnavin, C.S. Wong, J. Panpranot, and S. Damrongsakkul. “Plasma enhancement of in vitro attachment of rat bone-marrow-derived stem cell on cross-linked gelatin films” *Journal of Biomaterials Science Polymer Edition*, 23: 1485-1504 (2011), (IF. 2.505, ISI, Q2)
- 12) **I. Prasertsung**, R. Mongkolnavin, S. Damrongsakkul, C. S. Wong. “Surface modification of crosslinked gelatin using oxygen AC 50 Hz glow discharge” *Surface and Coating Technology*, 205: S133-S138 (2010) (IF. 2.589, ISI, Q1)
- 13) **I. Prasertsung**, S. Kanokpanont, R. Mongkolnavin, S. Damrongsakkul. “The effects of pulsed inductively coupled plasma (PICP) on physical properties and biocompatibility of crosslinked gelatin films” *International Journal of Biological Macromolecules*, 46: 72-78 (2010) (IF. 3.671, ISI, Q2)
- 14) **I. Prasertsung**, S. Kanokpanont, V. Thanakit, T. Bunaprasert, S. Damrongsakkul. “Development of acellular dermis from porcine skin using periodic pressurized technique” *Journal of biomedical materials research part B: Apply biomaterials*, 85B: 210-219 (2008) (IF. 3.189, ISI, Q2)

International proceedings:

- 1) P.chutinane, **I. Prasertsung**, N.saito, S.Damrongsakkul, “Conversion of cellulose to Reducing Sugar by Solution plasma Process (SPP)” The 5th TICHE International conference 2015 Pattaya, Thailand
- 2) **Isarawut Prasertsung**, Siriporn Damrongsakkul, Nagahiro Saito, “Degradation of chitosan by solution plasma process” 13th International Symposium on Biomimetic Materials Processing (BMMP-13), Hotel Associa Takayama, Japan, 22-26 January 2013 (Oral presentation)
- 3) **Isarawut Prasertsung**, Siriporn Damrongsakkul, Nagahiro Saito, Osamu Takai, “The effects of solution plasma on the crosslinking of gelatin” Eleventh International Symposium on Biomimetic Materials Processing (BMMP-11), Noyori Conference Hall, Nagoya University, Japan, 25-28 January 2011 (Oral presentation)

- 4) **Isarawut Prasertsung**, Rattachat Mongkolnavin, Sorada Kanokpanont, Chiow San Wong, Siriporn Damrongsakkul, “Enhancement of in vitro biocompatibility of crosslinked gelatin film by AC 50Hz nitrogen glow discharge” Tissue Engineering & Regenerative Medicine International Society Asia Pacific Chapter Meeting (Termis AP 2010), Sheraton on the Park, Sydney, Australia, 15-17 September 2010 (Oral presentation)
- 5) **Isarawut Prasertsung**, Sorada Kanokpanont, Rattachat Mongkolnavin, Siriporn Damrongsakkul, “Effects of pulse inductively couple plasma on the properties of gelatin” The 13th International Conference on Biomedical Engineering (ICBME2008), Suntec Singapore International Convention and Exhibition Centre, Singapore, 3-6 December 2008 (Poster presentation)
- 6) **Isarawut Prasertsung**, Sorada Kanokpanont, Tanom Bunaprasert, Siriporn Damrongsakkul, “Characterization of regenerated ADM scaffolds from porcine acellular dermis” The 3rd International Symposium on Biomedical Engineering (ISBME2008), Grand Mercure Hotel, Bangkok, Thailand, 10-11 November 2008 (Oral presentation)
- 7) **Isarawut Prasertsung**, Sorada Kanokpanont, Voranuch Thanakit, Tanom Bunaprasert, Siriporn Damrongsakkul, “Development of acellular dermis from porcine skin using periodic pressurized technique” The 6th Asian Bioceramics Conference, Sofitel central plaza, Bangkok, 7-10 November 2006. (Oral presentation)
- 7) **Isarawut Prasertsung**, Sorada Kanokpanont, Tanom Bunaprasert, Siriporn Damrongsakkul, “Development of acellular dermis from porcine skin” BioThailand 2005 Conferences, Queen Sirikit National Convention Center, Bangkok, 2005 (Poster presentation)

National proceeding:

1. **Isarawut Prasertsung**, Sorada Kanokpanont, Tanom Bunaprasert, Siriporn Damrongsakkul, “Preparation of porcine acellular dermis using periodic pressurized Technique” The 5th National Conference on Biomedical Engineering, The twin tower hotel, Bangkok, 8 July 2007 (Poster presentation)

References:

- **Prof.Dr.Siriporn Damrongsakkul**
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