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สาขาวิชาเทคโนโลยีธรณี คณะเทคโนโลยี มหาวิทยาลัยขอนแก่น

รศ. ดร. ศรัญญา พรหมโคตร์

**Assoc.Prof.Dr. Sarunya Promkotra**

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| Professional Experiences | Geochemist & Material Scientist (Nanocomposites)  Faculty of Technology, Khon Kaen University, Thailand  2016 (March-April) **Co-researcher**, SERVIR-Mekong program, implemented by the Asian Disaster Preparedness Center (ADPC), funded by USAID and NASA  2010-2011 **Visiting Professor**  Faculty of Engineering**, Namibia University of Science and Technology** (formerPolytechnic of Namibia), Windhoek, Namibia |
| Working Experiences | 1995–present Department of Geotechnology, Faculty of Technology, Khon Kaen University, Khon Kaen, Thailand  **Associate Professor in Material Sciences**   * Teaching mainly in Nanotechnology, Clay Technology & Engineering, Geochemistry, Advance Thermodynamic Geochemistry, Geochemical Analysis for Minerals and Rocks, Geotechnology of Waste Management   1993–1994 P.T. Industry Co., Ltd. Lumphun, Thailand  **Chemist**   * Managing in Production Process of Activated Carbon from Lignite * Production Control   1992–1993 Department of Mining Engineering, Faculty of Engineering, Chiang Mai University, Chiang Mai, Thailand  **Scientist**   * Mineral analysis * Research assistant in Mineral Processing   1991-1992 M.T. Manufacturing Co., Ltd., Bangkok, Thailand  **Head, R&D in Cosmetic Plant**   * Created New Products, e.g. Shaving Foam, Shampoo, Liquid Soap   1989–1991 Mun Ying Co., Ltd., Ratchaburi, Thailand  **Head of QC Section and Production Process**   * Chemist   1989 Sithinan Co., Ltd., Pathumthani, Thailand  **Chemist, R&D**   * Setting up a New Standard Method for Testing Mung Bean Starches and Vermicelli |
| Educational Background | 1984-1989 **B.S. (Chemistry),** Chiang Mai University, Chiang Mai, Thailand  1993-1995 **M.S. (Geology)**, Chiang Mai University, Chiang Mai, Thailand  1997-2004 **Ph.D. (Metallurgical and Materials Engineering)**  Colorado School of Mines, Colorado, USA  **Dissertation Title**: Micromechanical Testing of Two-Dimensional Aggregated Suspensions of Colloidal Particles  2007 **Diploma in Groundwater Exploration, Water Resource Exploitation and Conservation**  The Hebrew University of Jerusalem, Rehovot, Israel |
| Research Interests | Mechanical Properties of Materials, Nanomaterials (Clays & Composite Materials), Colloidal Aggregation, Groundwater Hydrogeochemistry, Petroleum Geochemistry, Biopolymer |
| Research Activities | 1. Material production for water filtration by using agricultural waste mixing in clay-fired ball for drinking-water filtration (2015), KKU Research Fund, Thailand  2. Research Project and Synthetic Fuel Oil Development for Aircraft by Hydroprocessing Process (2014), Air Force Fund, Thailand  3. Water quality investigation for water resources sustainability to evaluate potentials for consumables in Ban Kong, Nong Rue District, Khon Kaen Province (2013), KKU Research Fund, Thailand  4. Correlation of geochemical equilibria and dynamic transport of evaporite dissolution (2012-2015), KKU Research Fund  5. Variation of Hydrogeochemical Composition of Brines for the Sinkhole Assessment in Udonthani and Sakon Nakhon Province (2008), NSTDA, Thailand  6. Mass Transport Processes and Concentrated Distributions of Trace Metals in Loei River (2005), Khon Kaen University’s Research Fund |
| Book Publications | 1. นาโนเทคโนโลยีเบื้องต้น (เล่มที่ 1) (2548); Introduction to Nanotechnology (2005)  2. หลักสำคัญทางธรณีเคมี (2553); Essentials of Geochemistry (2010)  3. การวิเคราะห์ทางธรณีเคมี (2544); Geochemical Analysis (2011)  4. เทคโนโลยีนาโนประกอบ (2557); Nanocomposite Technology (2014)  5. วัสดุธรณีเกลือหิน-หินเกลือระเหย (2560); Rock Salt-Evaporite Geomaterials: Physico-Chemical Characteristics related to Mineralogy, Hydrogeochemistry, and Chemical Kinetics (2017) |
| Published Papers  (the last 5 years) | Namthip Khuncharee, **Sarunya Promkotra** and Tawiwan Kangsadan, 2017, Relationship of Lithostratigrafic Unit and Petroleum Qualities in some Gas Field and Oil Field of Thailand, ICES 2017: 1st International Congress on Earth Sciences in SE Asia, 15-17 November 2017, Brunei.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2017, Morphological Arrangement of Two-Dimensional Aggregated Colloid, AIP Conference Proceedings, 1858, 020003-1-6.  Kritika Trakoolngam and **Sarunya Promkotra**, 2016,Mechanical Behavior of Fired-Clay Bricks from Stream Sediments under Uniaxial Compressive Loading,Key Engineering Materials**,** Vol. 690, 252-258.  Trakoolngam, K., and **Promkotra, S.,** 2016, Compressive mechanical behavior of red loess/black-rice husk ash composite material under variations of firing temperature. Suranaree Journal of Science and Technology (In press).  Trakoolngam, K., and **Promkotra, S.,** 2016, Nam Phong Sediments for manufacturing of fired-clay bricks in the Northeast of Thailand, Thematic Session “Geoscience for the Society”, 52nd CCOP Annual Session, Bangkok, Thailand.  Pimchanok Chartchonbot and **Sarunya Promkotra**, 2016, Characteristics of Hydrochemical Species in Upper Nam Phong Catchment, Thematic Session “Geoscience for the Society”, 52nd CCOP Annual Session, Bangkok, Thailand.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2015, Compressive Strength in Various Submersion Tests of Fired Clay Bricks from Chi River Sub-Basin, Key Engineering Materials Vol. 659, 64-68.  K. Kuntanoo, **S. Promkotra**, and P. Kaewkannetra, 2015, Fabrication of Novel Polyhydroxybutyrate-co-Hydroxyvalerate (PHBV) Mixed with Natural Rubber Latex, Key Engineering Materials Vol. 659, 404-408.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2015, Evaluation of Phase Envelope on Natural Gas, Condensate and Gas Hydrate, AIP Conference Proceedings, 1653, 020089-1- 020089-2.  K. Kuntanoo, **S. Promkotra**, and P. Kaewkannetra, 2015, Physical-biopolymer Characterization of Polyhydroxybutyrate-co-hydroxyvalerate (PHBV) Blended with Natural Rubber Latex, AIP Conference Proceedings, 1653, 020063-1–020063-8.  **Sarunya Promkotra,** 2014,Dynamics of Suspended Sediments related to Fine Particles in Lower  Mekong River, Applied Mechanics and Materials Vols. 446-447, 1528-1533.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2014, Chemical Thermodynamics of Hydrocarbon Compositions in Natural Gas Field, Northeast of Thailand, I. Dincer et al. (eds.), Progress in Exergy, Energy, and the Environment, Springer International Publishing Switzerland, 1017-1027.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2014, Mathematical Model of Petroleum Dynamics in Closed Conduit, I. Dincer et al. (eds.), Progress in Exergy, Energy, and the Environment, Springer International Publishing Switzerland, 1041-1053.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2014, Interactive Force of Two-Dimensional Compressive Deformation by Discrete Element Method (DEM), Defect and Diffusion Forum Vol. 353, 106-110.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2014, Dynamic Correlation Function of Monodispersed Colloid. Applied Mechanics and Materials Vols. 446-447, 176-180.  **Sarunya Promkotra**, 2014, Compressive Aggregates of Two-Dimensional Mono-disperse to Assess Flaw Dissemination, Defect and Diffusion Forum Vol. 353, 101-105.  **Sarunya Promkotra**, 2013, Applicable Fine Stream Sediments from Upper Chi River Produced Fired Clay Bricks, Applied Mechanics and Materials Vols. 423-426, 1041-1045.  K. Kuntanoo, **S. Promkotra**, and P. Kaewkannetra, 2013, Biodegradation of Polyhydroxybutyrate-Co-Hydroxyvalerate (PHBV) Blended with Natural Rubber in Soil Environment, World Academy of Science, Engineering and Technology, Vol. 7, No.12.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2013, Characteristic Behaviors in Compressive Strength of Two-Dimensional Aggregates, Advanced Materials Research Vol. 746, 293-296.  **Sarunya Promkotra**, 2013, Chemical Kinetics between Brine and Rock Salt Transitions, Defect and Diffusion Forum Vols. 334-335, 43-48.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2013, Geochemical Speciation Associated to Brine and Groundwater, Applied Mechanics and Materials Vols. 423-426, 1422-1426.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2013, Groundwater Salt-Dissolution Distribution on Salt Producing Process Involved in Chemical Speciation in Sakon Nakhon Basin, Thailand, International Conference on Frontiers of Environment, Energy and Bioscience (ICFEEB 2013), 457-461.  **Sarunya Promkotra** and Tawiwan Kangsadan, 2013, Petroleum Sources by Dynamic Petroleum  Migration in Gas Reservoir, International Conference on Frontiers of Environment, Energy and Bioscience (ICFEEB 2013), 475-479.  **Sarunya Promkotra**, 2013, Phase Equilibria of Condensate and Natural Gas, Advanced Materials Research Vol. 746, 529-532.  Pakawadee Kaewkannetra and **Sarunya Promkotra**, 2013, Quality Improvement and Characteristics of Polyhydroxyalkanoates (PHAs) and Natural Latex Rubber Blends, Defect and Diffusion Forum Vols. 334-335, 49-54. |