

U	Supra Cluster	Cluster	#	Research Title	Corresponding Author*
KMUTT	Agriculture & Food	Bioscience, Bioengineering and Food Engineering Cluster	1	Effect of hot water, UV-C and modified coconut oil treatments on suppression of anthracnose disease and maintenance of quality in harvested mango cv. Chok-Anan	Pongphen Jitareerat
		Bioscience, Bioengineering and Food Engineering Cluster	2	Treatment of organic compounds from industrial waste water by plants	Paitip Thiravetyan
		Bioscience, Bioengineering and Food Engineering Cluster	3	Fabrication, mechanical and antimicrobial properties of nanofibrous film of cellulose acetate-poly(ethylene oxide) composite polymer containing nano zinc particles	Saowakon Wongsasulak
		Bioscience, Bioengineering and Food Engineering Cluster	4	Monitoring the reaction mixtures for preparation of policosanol from rice bran wax via a Phenogel column	Kornkanok Aryusuk
		Bioscience, Bioengineering and Food Engineering Cluster	5	Postharvest management of dragon fruit (<i>Hylocereous undatus</i>): Abscisic acid and jasmonic acid related the development of fruit	Varit Srilaong
		Bioscience, Bioengineering and Food Engineering Cluster	6	Functional Properties of Dietary Fiber Powder from Cabbage Outer Leaves	Naphaporn Chiewchan
		Bioscience, Bioengineering and Food Engineering Cluster	7	Biological removal of nitrogen and phosphorus from wastewater and utilization	Chalermraj Wantawin
		Bioscience, Bioengineering and Food Engineering Cluster	8	Drying of Food Using Microwave with Vacuum and Far-infrared Radiation	Ampawan Tansakul
		Bioscience, Bioengineering and Food Engineering Cluster	9	Systematic regulation of lipid biosynthesis in microorganisms: Implications for biotechnological industries	Kobkul Laoteng
		Bioscience, Bioengineering and Food Engineering Cluster	10	Developing enzyme technology for bioconversion and biorefinery	Khanok Ratanakhanokchai
		Bioscience, Bioengineering and Food Engineering Cluster	11	A novel NAD ⁺ /MWNTs nanocomposite-based electrochemical biosensor for measuring mevalonic acid	Rungtiva Palangsuntikul
		Bioscience, Bioengineering and Food Engineering Cluster	12	Elasticity of chondrocyte: Experiment with Atomic force microscope	Teeranoot Chanthasopeephan
		Bioscience, Bioengineering and Food Engineering Cluster	13	Development of nutraceutical products and flavoring agents from protein hydrolysate of plant meals by product from agricultural industries	Orapin Kerdchoechuen
		Bioscience, Bioengineering and Food Engineering Cluster	14	Development of biofoam from natural polymers for fresh vegetable and fruit packaging	Orapin Kerdchoechuen
		Bioscience, Bioengineering and Food Engineering Cluster	15	Research projects for problem solving relating to production of fruit and vegetable in hermetically sealed container	Tipaporn Yoovidhya
		Bioscience, Bioengineering and Food Engineering Cluster	16	Problem solving for biological wastewater treatment: Wastewater containing heavy metals and cyanide	Suntud Sirianuntapiboon

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		Bioscience, Bioengineering and Food Engineering Cluster	17	Development of a microfluidic platform technology for Biological detection	Sirimarn Ngamchana
		Bioscience, Bioengineering and Food Engineering Cluster	18	Production of Immunoglobulin Y (IgY) for White Spot Syndrome Virus Protection in Shrimp using a new Baculovirus Surface Display Antigen	Kanokwan Poomputsa
		Bioscience, Bioengineering and Food Engineering Cluster	19	Performance Development of Computational Gene-Finding for Non coding RNA (ncRNA)	Marasri Ruengjitchatchawalya
		Bioscience, Bioengineering and Food Engineering Cluster	20	Modification of rice starch and rice flour by heat-moisture treatment	Dudsadee Uttapap
		Bioscience, Bioengineering and Food Engineering Cluster	21	Mechanical Properties and Biocompatibility of F-DLC coated on Ti alloys for Biomedical Applications	Anak Khantachawana
		Bioscience, Bioengineering and Food Engineering Cluster	22	Torque Analysis of Orthodontics Screw Mini Implant by Finite Element Method	Anak Khantachawana
		Bioscience, Bioengineering and Food Engineering Cluster	23	Development of Ligand-Conjugated Nanoparticles as Delivery Vectors for Doxorubicin	Kwanchanok Viravaidya-Pasuwat

23

KMUTT	Industry (material science, production)	Materials Science and Engineering	1	Extraction of keratin from chicken feathers and the developments the keratin based nanofibers and composite materials for various applications	Jatuphorn Wootthikanokkhan
		Materials Science and Engineering	2	Development of Fly Ash and Biomass Ash as Concrete Materials	Chai Jaturapitakkul
		Materials Science and Engineering	3	Research and Development of Ceramics and Electronics Materials	Wandee Onreabroy
		Materials Science and Engineering	4	Title or projects or sub-projects in English (A study and development of thin film of TiO ₂ for VOCs removal)	Virote Boonamnuayvitaya
		Materials Science and Engineering	5	Development of Platform Technology for the Nanomaterial Based Ultrasensitive Detection in Medical, Food, Agriculture and Environment	Werasak Sureungchai
		Materials Science and Engineering	6	Developments New Materials for Sanitary, Wear and Reinforcement Applications	Narongrit Sombatsompop
		Materials Science and Engineering	7	Utilization of Wastes in Construction Materials Engineering	Suwimol Asavapisit
		Materials Science and Engineering	8	Study on Mechanical Properties of Materials in Geotechnical Engineering	Pornkasem Jongpradist
		Materials Science and Engineering	9	A study and analysis of physical behaviors of laminated piezoelectric devices	Sontipee Aimmanee
		Materials Science and Engineering	10	Research and Development of Optical Materials for X/g-Rays Detection and Laser Application	Weerapong Chewpraditkul
		Materials Science and Engineering	11	The preparation of TiO ₂ -HAP nanoparticles by colloidal emulsion aphrons method for photocatalytic reaction	Somnuk Jarudilokkul
		Materials Science and Engineering	12	Conversion of lignocellulosic biomass to fuels and value-added chemicals	Navadol Laosiripojana

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KMUTT	Industry (production)	Manufacturing and Automation System	1	Development of Metal Forming Die using Tribological Technology	Varunee Premanond
		Manufacturing and Automation System	2	Process Development for High Strength Steel Sheet in Automotive Parts	Surasak Suranuntchai
		Manufacturing and Automation System	3	Investigation of Nickel Aluminium Bronze Alloy under Hot Deformation	Surasak Suranuntchai
		Manufacturing and Automation System	4	Prevention of adhesion in forming operation of stainless steel	Pongpan Kaewtatip
		Manufacturing and Automation System	5	Retrieval and Localization of Multiple Specific Objects with Hough Voting based Ranking and A Contrario Decision	Pakorn Kaewtrakulpong
		Manufacturing and Automation System	6	Synthesis of an LMI based Fuzzy Controller and Filter Design for Uncertain Systems with Applications in Signal Processing, Bio-engineering and Electrical Engineering	Wudhichai Assawinchaichote
		Manufacturing and Automation System	7	Effects of wave propagation paths on integrity assessment and characteristic of structures and materials	Asa Prateepasen
		Manufacturing and Automation System	8	Efficient Network System Design and Management Considering Security, Reliability, and Quality of Service	Naruemon Wattanapongsakorn
		Manufacturing and Automation System	9	Manufacturing for strengthening improvement of nonferrous alloys	Siriporn Rojananan
		Manufacturing and Automation System	10	Road Traffic Estimation from a Mobile Probe Vehicle with GPS and Machine Vision	Poj Tangamchit
		Manufacturing and Automation System	11	Using artificial neural network to predict tool life in cold forging the socket head screw	Kusol Prommul
		Manufacturing and Automation System	12	Training Software for Esophageal Speech Developed on Game-based PC	Panuthat Boonpramuk
		Manufacturing and Automation System	13	Face Orientation Recognition for Electric Wheelchair Control	Pranchalee Samanpiboon
		Manufacturing and Automation System	14	Human Fall Detection Using Standard Deviation of C-Motion Method	Pranchalee Samanpiboon
		Manufacturing and Automation System	15	User-Centred Home Automation	Sarawan Wongsa
KMUTT	Energy	Energy and Environmental System	1	Assessing and monitoring forest biodiversity in preparation for climate change	Dusit Ngoprasert
		Energy and Environmental System	2	Heat transfer enhancement of fluid under magnetic field and electric field effect	Nat Kasayapanand
		Energy and Environmental System	3	Heat Transfer through Greenhouse Screening Materials by Free and Forced Convections	Pongphol Rakkarnane
		Energy and Environmental System	4	The Significant Wave Patterns at the Bangkhuntien shoreline and the Effect of Coastal Protection Structures	Prasertsak Ekphisutsunton
		Energy and Environmental System	5	Development of Image Processing Method for Using as a Tool in Wave Flume Measurement	Chaiyuth Chinnarasri
		Energy and Environmental System	6	Sensorless Control of BLDC Motor Drive with 150° Conduction Mode to Minimize Torque Ripple	Mongkol Konghirun

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		Energy and Environmental System	7	A Study on Daylight and Heat Gain through Windows and the Use of Light Pipes	Surapong Chirattananon
		Energy and Environmental System	8	Development of mathematical model for designing agricultural products fuel feed fuel cell	Roongrojana Songprakorp
		Energy and Environmental System	9	Enhanced Production of Bioethanol from Agricultural Residues using Simultaneous Saccharification and Fermentation by Co-culture	Jirasak Kongkiattikajorn
		Energy and Environmental System	10	A Study of Parameters Affecting Energy Consumption in Hydrogen Production using Water Electrolysis Process	Kaokanya Sudapresert
		Energy and Environmental System	11	Development of fluid transport by electro-wetting on dielectrics technique	Wishsanuruk Wechsator
		Energy and Environmental System	12	Research on the Improvement of the Thermal Equipment Performance	Somchai Wongwiset
		Energy and Environmental System	13	Improvement of electrode and electrolyte performance for alcohol fuel cells for alcohol fuel cells	Apichai Therdthianwong
		Energy and Environmental System	14	A Study of Electricity Sustainability Index in ASEAN Countries	Bundit Fungtammasan
		Energy and Environmental System	15	Study on the Feed-in Policy for Electricity Produced from Renewable Energy Sources	Kuskana Kubaha
		Energy and Environmental System	16	Enhancement of carbon sequestration in rice field	Sirintornthep Towprayoon
KMUTT	Industry (calculation)	Computational Science, Engineering, and Information Technology	1	Fixed Point Computation and Equilibrium Problems	Poom Kumam
		Computational Science, Engineering, and Information Technology	2	Computational Modeling for Environmental Systems and Applications	Thidarat Bunsri
		Computational Science, Engineering, and Information Technology	3	Development of Structural Steel Systems for Enhanced Seismic Resistant Structures	Sutat Leelataviwat
		Computational Science, Engineering, and Information Technology	4	Molecular dynamic simulation of the thiosulfate ion in aqueous solution	Chinapong Kritayakornupong
		Computational Science, Engineering, and Information Technology	5	The Effect of Seasonal Variation for the Transmission of Dengue with Two Serotypes in Thailand	Wirawan Chinviriyasit
		Computational Science, Engineering, and Information Technology	6	e-Service for Ageing Society	Wichian Chutimaskul
		Computational Science, Engineering, and Information Technology	7	Visualization Framework for Medical Imaging	Tiranee Achalakul
		Computational Science, Engineering, and Information Technology	8	Evaluation of Catchment Potential using Mathematical Model and GIS	Chaiwat Ekkawatpanit