



### MAT Plenary 1

Tuesday, July 25, 2017 13.00-13.30

Singaraja Room 2nd fl

Invited Speaker : Prof. Dr. H.J. Heeres (Rijksuniversiteit Groningen), Netherland

### Mat 1A : Polymer & Nanomaterials

Tuesday, July 25, 2017 13.30-15.00

Singaraja Room 2nd fl

No	Paper #	ID	Author	Title	Affiliation	Time
1	485	MAT1A - 1	Mochamad Chalid, Ghiska Ramahdhita and Ismojo -	Feasibility Study of a Chemical Treatments Sequence on Sorghum Fibers Compatibility Enhancement in Polypropylene Composites	Universitas Indonesia, Indonesia	13.30-13.45
2	684	MAT1A - 2	Cahyo Budiyanoro	The Influence of Nano Filler on the Thermal and Mechanical Properties of PP	Muhammadiyah University of Yogyakarta, Indonesia	13.45-14.00
3	232	MAT1A - 3	Dani Gustaman Syarif, Djoko Hadi Prajitno and Efrizon Umar	Characteristics of Nanofluids Made from Solgel Synthesized-Al <sub>2</sub> O <sub>3</sub> Nanoparticles Utilizing Citric Acid and PEG as Organic Agent and Bauxite as Raw Material	Center for Applied Nuclear Science and Technology, Indonesia	14.00-14.15
4	925	MAT1A - 4	Arbi Irsyad Fikri, Hanindito Haidar Satrio, Muhammad Joshua Y. B., Mochamad Chalid and Jaka Fajar Fatriansyah	The Investigation of The Melting Temperature Effect on The Rate of Solidification In Polymer Using Modified Phase-Field Model	Universitas Indonesia, Indonesia	14.15-14.30
5	937	MAT1A - 5	Nofrijon Sofyan, Aga Ridhova, Akhmad Herman Yuwono, Arief Udhiarto	Preparation of Anatase TiO <sub>2</sub> Nanoparticles Using Low Hydrothermal Temperature for Dye-Sensitized Solar Cell	Universitas Indonesia, Indonesia	14.30-14.45
6	938	MAT1A - 6	Ahmad Herman Yuwono, Amalia Sholehah, Nofrijon Sofyan, Latifa Hanum Lelasari	One Dimensional Inorganic Semiconductor Oxides Nanostructures derived from Wet-Chemistry Routes and Post-Hydrothermal Treatment	Universitas Indonesia, Indonesia	14.45-15.00
7	326	MAT6 - 4	Masruroh Masruroh, Mahardika Auditia Hanif, Setyawan P Sakti and D. J. Djoko Santjojo	Effect Plasma Power on Surfaces of SiO <sub>2</sub> Quartz Crystal during Etching by Using CH <sub>2</sub> FCF <sub>3</sub> Gas	Brawijaya University, Indonesia	15.00-15.15



**MAT 1B : Porous Materials & Solar Cell**

Tuesday, July 25, 2017 13.30-15.00

**Frangipani Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	379	MAT1B – 1	Jaka Fajar Fatriansyah, Tryatmaja Matari and Sri Harjanto	The Preparation of Activated Carbon from Coconut Shell Charcoal by Novel Mechano-Chemical Activation Method	Universitas Indonesia, Indonesia	13.30-13.45
2	264	MAT1B – 2	Nofrijon Sofyan, Aga Ridhova, Akhmad Herman Yuwono and Arief Udhiarto	Fabrication of Solar Cells with TiO <sub>2</sub> Nanoparticles Sensitized Using Natural Dye Extracted from Mangosteen Pericarps	Universitas Indonesia, Indonesia	13.45-14.00
3	319	MAT1B – 3	Erllyta Septa Rosa, Natalita Maulani Nursam, Shobih and Rizky Abdillah	Improving the Efficiency of Perovskite Solar Cell through the Addition of Compact Layer under the Electron Transfer Material	Indonesian Institute of Science, Indonesia	14.00-14.15
4	804	MAT1B – 4	Rangga Winantyo and Kenji Murakami	ZnO-Nanorods Formation for Dye Sensitized Solar Cells Applications	Multimedia Nusantara University, Indonesia	14.15-14.30
5	407	MAT1B – 5	Cipta Panghegar Supriadi, Evvy Kartini, Wagiyu Honggowiranto and Kris Tri Basuki	Synthesis and Characterization of Carbon Material Obtained from Coconut Coir Dust by Hydrothermal and Pyrolysis	Polytechnic Institute of Nuclear Technology, Indonesia	14.30-14.45
6	184	MAT1B – 6	Vika Rizkia, Badrul Munir, Bambang Suharno and Johny Wahyuadi Soedarsono	An Analysis on the Effect of the Electrolyte Resistivity Over the Geometric Features (i.e. Pore Diameter and Pore Density) of Anodic Aluminium Oxide (AAO) Films Produced by Single-step Anodization	Politeknik Negeri Jakarta, Indonesia	14.45-15.00
7	301	MAT1B – 7	Luh Putu Ike Midiani and I Wayan Nata Septiadi	The Characterization of Pore Structure and Capillary Sintered Basalt for Wick Heat Pipe Developed	Bali State Polytechnic, Indonesia	15.00-15.15



**MAT 2 : Casting Process**

Tuesday, July 25, 2017 15.15-18.00

**Frangipani Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	17	MAT2 – 1	Hafid Abdullah and Sri Bimo Pratomo	The Implementation of the Track Link Tank Manufacturing for a Light Type Army Tank as a Substitution Imported	Metal Industries Development Centre, Indonesia	15.15-15.30
2	280	MAT2 – 2	Anne Zulfia, Egy Ciptia Putro, Reza Mohammad Aditya and Sergi Andiva	The Role of Sr and TiB on Mechanical Properties of Aluminium 6061 Composite Produced Through Stir Casting Method	Universitas Indonesia, Indonesia	15.30-15.45
3	293	MAT2 – 3	Donanta Dhaneswara, Anne Zulfia Syahrial, Luthfi Noviardi Andani and Nofrijon Sofyan	Mechanical Properties of Nano SiC-Reinforced Aluminum A356 Fabricated by Stir Casting Method	Universitas Indonesia, Indonesia	15.45-16.00
4	771	MAT2 – 4	Donanta Dhaneswara, Anne Zulfia Syahrial and Raka Nuralif Verdiyanto	Mechanical Properties of Al <sub>2</sub> O <sub>3</sub> -Reinforced Aluminum A356 with Grain Refiner Al-5Ti-1B Fabricated by Stir Casting Method	Universitas Indonesia, Indonesia	16.00-16.15
5	829	MAT2 – 5	Rachman Kurnia and Bondan Tiara Sofyan	Effect of Cold Rolling and Annealing Temperature on the Recrystallization and Mechanical Properties of Al-4.7Zn-1.8Mg (wt. %) Alloy Fabricated by Squeeze Casting	Universitas Indonesia, Indonesia	16.15-16.30
6	269	MAT2 – 6	Hasan Akhyar, Priyo Tri Iswanto and Viktor Malau	Effect of casting temperature, T4 and T6 heat treatment on tensile strength of Al-5.9Cu-1.9Mg alloy	Syiah Kuala University, Indonesia	16.30-16.45
7	412	MAT2 – 7	Bambang Suharno, Sugeng Supriyadi, Gerra Maulana and Rizki Hidayatullah	Debinding Rate Enhancement of 17-4 Precipitation Hardening Stainless Steel Solvent Debinding on Metal Injection Molding Process as the Material for Orthodontic Bracket	Universitas Indonesia, Indonesia	16.45-17.00
8	897	MAT2 – 8	Rianti Dewi Sulamet-Ariobimo, Yun Gemilang, Dhonanta Dhaneswara, Johnny Wahyuadi Soedarsono and Bambang Suharno	Casting Design Modification to Improved Casting Yield in Producing Thin Wall Ductile Iron Plate	Trisakti University, Indonesia	17.00-17.15



## MAT Plenary 2

Wednesday, July 26, 2017 08.00-08.30

### Singaraja Room 2nd fl

Invited speaker : Prof. Hiroshi Nishikawa (JWRI), JAPAN

## MAT 3A : Lithium Battery

Wednesday, July 26, 2017 08.30-10.00

### Singaraja Room 2nd fl

No	Paper #	ID	Author	Title	Affiliation	Time
1	137	MAT3A - 1	Heri Jodi, Anne Zulfia, Sudaryanto Sudaryanto and Evvy Kartini	Synthesis and Electrochemical Characterization of New Li <sub>2</sub> O-P <sub>2</sub> O <sub>5</sub> Compounds for Solid Electrolytes.	National Nuclear Energy Agency of Indonesia, Indonesia	08.30-08.45
2	289	MAT3A - 2	Bambang Priyono, Nita Dianova, Anne Zulfia Syahrial and Achmad Subhan	Optimizing Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Anode Performance Using Silicon-Nano Particle for Half Cells Li-Ion Battery as Prepared by Hydrothermal Mechanochemical Using Li <sub>2</sub> CO <sub>3</sub> as Li <sup>+</sup> -ion source	Universitas Indonesia, Indonesia	08.45-09.00
3	265	MAT3A - 3	Nofrijon Sofyan, Adlan Mizan, Anne Zulfia and Achmad Subhan	Characteristic of LiFe(1-x)V <sub>x</sub> PO <sub>4</sub> /C Using Carbon Pyrolyzed from Table Sugar for Lithium Ion Battery Cathode	Universitas Indonesia, Indonesia	09.00-09.15
4	459	MAT3A - 4	Sudaryanto Sudaryanto, Evi Yulianti and Nur Shofiana Khoironi	Molecular and Ionic Mobility of Chitosan Based Solid Polymer Electrolyte for Lithium-Ion Battery	National Nuclear Energy Agency of Indonesia, Indonesia	09.15-09.30
5	366	MAT3A - 5	Achmad Subhan, Dedy Setiawan and Sitti Ahmiatri Saptari	Preparation and Ionic Conductivity of Li <sub>3.9</sub> Ca <sub>0.1</sub> Ti <sub>5</sub> O <sub>12</sub> Using Waste Chicken Eggshells as Ca Source for Anode Material of Lithium Ion Batteries	Indonesian Institute of Science (LIPI), Indonesia	09.30-09.45
6	561	MAT6 - 3	Erfan Handoko and Nofrijon Sofyan	Double Layer Microwave Absorption Characteristics of Barium Hexaferrite/Silica Composite for X-Band Frequencies	Jakarta State University, Indonesia	09.45-10.00



**MAT 3B : Welding and Heat Treatment**

Wednesday, July 26, 2017 08.30-10.00

**Frangipani Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	531	MAT3B - 1	Andi Rustandi and Suganta Handaru	Flux Coating Effect of SMAW 308L Electrode on Its Mechanical Properties and Corrosion Resistance for Cryogenic Application	Universitas Indonesia, Indonesia	08.30-08.45
2	144	MAT3B - 2	Winarto Winarto, Muhammad Anis and Refnaldi Refnaldi	Effect of Repeated Weld-Repairs on Microstructural and Mechanical Properties of Stainless Steel 304L and 316L	Universitas Indonesia, Indonesia	08.45-09.00
3	334	MAT3B - 3	Parikin Parikin, Mohammad Dani, Abu Khalid Riva'l, Agus Hadi Ismoyo, Muhammad Riza Iskandar and Arbi Dimiyati	Micro-Crystal Structures and Hardness of the Experimental 57Fe15Cr25Ni0.34C Steel Around the TIG-Welding	National Nuclear Energy Agency of Indonesia, Indonesia	09.00-09.15
4	251	MAT3B - 4	Wahyuaji Narottama Putra, Pandega Pramadtya Putra Pramuka and Myrna Ariati Mochtar	Effect of Sub-Zero Treatment on Microstructures, Mechanical Properties, and Dimensional Stability of AISI D2 Cold Work Tool Steel	Universitas Indonesia, Indonesia	09.15-09.30
5	77	MAT3B - 5	Zuldesmi Mansjur and Hendro Maxwell Sumual	Enhancement of Mechanical Properties of Cast Beta-Type Titanium Alloy by Aging Treatment	Manado State University, Indonesia	09.30-09.45
6	441	MAT3B - 6	Myrna Ariati	Optimizing of the Substrate Preheating Process to the Mechanical Properties of Cobalt-Based Alloy Coating on Alloy and Carbon Steel with High Velocity Oxygen Fuel (HVOF) Method	Universitas Indonesia, Indonesia	09.45-10.00



**MAT 4 : Corrosions and Protection Materials**

Wednesday, July 26, 2017 10.15-12.00

**Frangipani Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	446	MAT4 - 1	Norman Subekti, Johnny Wahyuadi Soedarsono, Andi Rustandi and Adam Septiyono Arlan	Corrosion Inhibition by a Caesalpinia Sappan L Modified Imidazoline for Carbon Steel API 5L Grade X60 in HCl 1M Environment	Universitas Indonesia, Indonesia	10.15-10.30
2	24	MAT4 - 2	I Wayan Yuda Semaradipta	Enhancement of CUI Inspection Program on Insulated Dead-Leg Piping in LNG Plant Bontang	PT Badak LNG, Indonesia	10.30-10.45
3	929	MAT4 - 3	Andi Rustandi, Nuradityatama, M. Nuradityatama, M. Faisal Rendi and Suganta Setiawan	Comparison of Pitting Corrosion Resistance of Austenitic Stainless Steel 304L and 316L Exposed to Aqueous Sodium Chloride Solution	Universitas Indonesia, Indonesia	10.45-11.00
4	254	MAT4 - 4	Deni Ferdian, Yudha Pratesa and Ahmad Angga Utama	Development of Al-5%Zn -Si as a Low Voltage Sacrificial Anode	Universitas Indonesia, Indonesia	11.00-11.15
5	554	MAT4 - 5	Harris Prabowo, Johnny Wahyuadi Soedarsono, Badrul Munir, Andi Rustandi and Yudha Pratesa	Predicting Models of CO <sub>2</sub> Materials Piping/Pipeline for PERTAMINA's CO <sub>2</sub> EOR Programs: Field Data, Software Simulation and Laboratory	Universitas Indonesia, Indonesia	11.15-11.30
6	429	MAT4 - 6	Rio Pudjirdarma Santoso and Rini Riastuti	Corrosion Evaluation of Heat Recovery Steam Generator Superheater Tube In Two Methods of Testing: Tafel polarization and Electrochemical Impedance Spectroscopy (EIS)	Universitas Indonesia, Indonesia	11.30-11.45



**MAT 5A : Extraction & Remaining Life Assessment**

Wednesday, July 26, 2017 14.00-15.30

**Bougenville Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	183	MAT5A - 1	Soesaptri Oediyani, Paramita Juwita Sari and Djoko Hadi Prayitno	The Effect of Coal Composition and Slag Basicity on Yield of Pig Iron	Sultan Ageng Tirtayasa University, Indonesia	14.00-14.15
2	489	MAT5A - 2	Ahmad Maksum, Michael Kelvin E Husein, Sulaksana Permana, Andi Rustandi and Johny Wahyuadi Soedarsono	A Preliminary Study on the Reduction of Limonite Ore by Using Rice Husk as a Reducing Agent	Universitas Indonesia, Indonesia	14.15-14.30
3	509	MAT5A - 3	Sulaksana Permana, Jonathan Kriswanto Hutauruk, Ryand Adhyputra, Ahmad Maksum, Johny Wahyuadi Soedarsono, Andi Rustandi, Kurnia Setiawan Widana, Kurnia Trinopiawan and Mutia Anggraini	Upgrading Tantalum and Niobium Oxides Content in Bangka Tin Slag with Double Leaching	Universitas Indonesia, Indonesia	14.30-14.45
4	330	MAT5A - 4	Himawan Tri Bayu Murti Petrus, Andreas Diga Pratama, Yosua Pangihutan Sihotang, Arini Muthiah Rosmaya Putri and Widi Astuti	Nickel Recovery from Hydrocracking Spent Catalyst using Acetic Acid: Leaching Performance and Kinetics Study	Gajah Mada University, Indonesia	14.45-15.00
5	321	MAT5A - 5	Vicky Indrafusa	Risk-Based Approach for Remaining Useful Life (RUL) Assessment of LNG/LPG Tank Badak LNG	PT Badak LNG, Indonesia	15.00-15.15
6	305	MAT5A - 6	Luthfi Ardiansyah	Remaining Life Assessment of Fiber Reinforced Plastic (FRP) Pipe in LNG Plant after 20 Years in Operation	PT Badak LNG, Indonesia	15.15-15.30



**MAT 5B : Composite and Ceramics Materials**

Wednesday, July 26, 2017 14.00-15.30

**Orchid Room 1st fl**

No	Paper #	ID	Author	Title	Affiliation	Time
1	706	MAT5B - 1	I.D.G Ary Subagia, Ni Made Dwidiani, Ahmad Herman Yuwono, I Ketut Gede Sugita and I Ketut Gede Wirawan	Thermal Conductivity Carbon/Basalt Fibers Reinforced Epoxy Hybrid Composites	Udayana University, Indonesia	14.00-14.15
2	482	MAT5B - 2	Jefri Bale, Dominggus Adoe and Kristomus Boimau	The Tensile Strength of Mechanical Joint Prototype of Lontar Fiber Composite	University of Nusa Cendana, Indonesia	14.15-14.30
3	472	MAT5B - 3	Fiska Yohana Purwaningtyas, Yuni Kusumastuti, Himawan Tri Bayu Murni Petrus and Budhijanto Budhijanto	Synthesis and Characterization Chitosan/Alginate/Geothermal Silica Scaffold	Gadjah Mada University, Indonesia	14.30-14.45
4	11	MAT5B - 4	H Aripin, Seitaro Mitsudo, I Nyoman Sudiana, Edwin Priatna, Nundang Busaeri and Svilen Sabchevski	Formation and Particle Growth of TiO <sub>2</sub> in Silica Xerogel Glass Ceramic During a Sintering Process	Siliwangi University, Indonesia	14.45-15.00
5	656	MAT5B - 5	Gandjar Pamudji, Bimasena Heribowo, Adam Yuta Prayoga and Heru Purnomo	Bond-Slip Behavior of Steel Bar Embedded in Lightweight Concrete Using Polypropylene Coarse Aggregate Coated with Sand	Universitas Indonesia, Indonesia	15.00-15.15
6	569	MAT5B - 6	Musnajam Musnajam, Vita Astini and Fachryano Yatjong	Utilization of Fly Ash and Nickel Slag PT. Antam as Material Substitution for Concrete	University of Sembilanbelas November, Indonesia	15.15-15.30
7	510	MAT5B - 7	Perdamean Sebayang, Candra Kurniawan, Toto Sudiro, Didik Aryanto, Eko Arief Setiadi, Konni Tamba and Djuhana Djuhana	Preparation of Fe <sub>3</sub> O <sub>4</sub> /Bentonite Nanocomposite from Natural Iron Sand by Co-Precipitation Method for Adsorbents Materials	Indonesian Institute of Science (LIPI), Indonesia	15.30-15.45





<b>MAT 6 : Electronic Materials</b>						
Wednesday, July 26, 2017 15.45-18.00						
<b>Bougenville Room 1st fl</b>						
No	Paper #	ID	Author	Title	Affiliation	Time
1	157	MAT6 - 1	Ade Mulyawan, Wisnu Ari Adi, Salim Mustofa and Yunasfi Yunasfi	Raman Spectroscopy Study, Magnetic and Microwave Absorbing Properties of Modified Barium Strontium Monoferrite Ba(1-x)Sr(x)Fe2O4	National Nuclear Energy Agency of Indonesia, Indonesia	15.45-16.00
2	546	MAT6 - 2	Salim Mustofa, Wisnu Ari Adi, Anton Prasetyo, Veinardi Suendo and A. Agung Nugroho	Effect of Structural Transition on Magnetic Properties of Ba-Doped LaMnO3 Nanopowders Characterized by Raman Spectroscopy	National Nuclear Energy Agency of Indonesia, Indonesia	16.00-16.15
3	728	MAT6 - 5	Satrio Herbirowo, Hendrik Hendrik, Nofrijon Sofyan and Agung Imaduddin	Effect of SiC and Sintering Temperature Variations on the Characteristic of Fe-Sheathed MgB2 Superconductor Wires	Indonesian Institute of Sciences, Indonesia	16.15-16.30
4	314	MAT6 - 6	Akhmad Herman Yuwono, Tri Arini, Latifa Hanum Lalasari, Nofrijon Sofyan, Andaradhi Nararya, Ghiska Ramahdita, Florentinus Firdiyono, Lia Andriyah, Achmad Subhan and Chairul Hudaya	The Effect of Various Precursors and Solvents on the Characteristics of Fluorine-Doped Tin Oxide (FTO) Conducting Glass Fabricated by Ultrasonic Spray Pyrolysis	Universitas Indonesia, Indonesia	16.30-16.45
5	786	MAT6 - 7	Agus Subagio, Alfin Darari, Istajib S. Hakim, Priyono, Pardoyo and Achmad Subhan	Preparation and Characterization of Carbon Nanotube/Graphite/Zinc Oxide Composite as Supercapacitor Electrode Material	Diponegoro University, Indonesia	16.45-17.00
6	350	MAT6 - 8	Jarot Raharjo, Masmui Masmui and Damisih Damisih	Effect of the Rare Earth Oxide Impurities on the Physical and Thermal Properties of Ce1-yGd1-xO2-1 (GDC) Composite Electrolyte IT-SOFC's	Agency For The Assessment and Application of Technology (BPPT), Indonesia	17.00-17.15