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## Chemical & Materials Engineering

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*PhD Symposium – 2<sup>nd</sup> Nov 2020*



THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

**ENGINEERING**

# Chemical & Materials Engineering

PhD Symposium | Monday 2<sup>nd</sup> November 2020

Oral Presentations – City Campus B401.439

09:30 – 09:40	Introduction / Welcome <b>Associate Professor Ashvin Thambyah (HOD)</b>
09:40 – 10:00	TBD <b>Eldon Tate – CEO Inhibit Coatings</b>
10:00 – 10:15	<b>Zhipeng Zhang</b> <i>Seawater as magnesium source for phosphorus recovery from wastewater</i>
10:15 – 10:30	<b>Matthew Ting</b> <i>Fabrication of stiffness modulated hydrogels</i>
10:30 – 10:45	<b>Badri Narayanan Narasimhan</b> <i>Hydrogen bonding dissipative hydrogels</i>
10:45 – 11:00	<b>Harpreet Kaur Chahal</b> <i>Investigation into the production of calcium phosphate coatings by inflight reaction of precursor feedstocks using plasma spraying</i>
11:00 – 11:15	<b>Ruby-Jean Clark</b> <i>Development of SrCl<sub>2</sub>-based composite materials for thermochemical energy storage</i>
11:15 – 11:30	<b>Sina Sheikholeslami</b> <i>Long-term field performance of environmental-friendly coil coatings</i>
11:30 – 11:45	<b>Ting Zhang</b> <i>Ag and Co<sub>3</sub>O<sub>4</sub> deposited black TiO<sub>2</sub> nanotubes: a dual cocatalyst with enhanced photocatalytic activity for organic pollution degradation under visible light</i>
11:45 – 12:00	<b>Charles Ikutegebe</b> <i>Efficient thermal energy storage system with phase change materials in buildings</i>
12:00 – 13:00	Lunch and Poster Viewing (Neon Foyer)
13:00 – 13:15	<b>Ying Zhu</b> <i>A new method to measure bite force and chewing comfort of elderly consumers</i>
13:15 – 13:30	<b>Tarek Kollmetz</b> <i>Surface engineering for stem cell research</i>
13:30 – 13:45	<b>Heiana Agnieray</b> <i>Protein-based biomaterials for 3D &amp; 4D printing</i>
13:45 – 14:00	<b>Navid Taghavi</b> <i>Bio-degradation of plastic waste</i>
14:00 – 14:15	<b>Terrell Thompson</b> <i>Influence of hydrothermal pretreatment on biogas and fertiliser production from pelagic Sargassum</i>
14:15 – 14:30	<b>Misagh Ebrahimpour</b> <i>Application of digital twin in process optimization and control</i>
14:30 – 14:45	<b>Mohamed Dabbour</b> <i>Geothermal well optimization using a coupled reservoir and process model</i>
14:45 – 15:00	<b>Subhasree Bhaskar</b> <i>Development of a plasma sprayed catalyst for Wet oxidation of organic waste</i>

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Poster Presentations – City Campus, Neon Foyer B401

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**Mahmood Jamil**

*Sn/TiO<sub>2</sub> based hybrid nanostructure materials for electrical energy storage*

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**Kapil Mamtani**

*Glycerolysis of free fatty acids*

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**Syeda Wishal Bokhari**

*A hybrid composite of rGO/TiO<sub>2</sub> as a double layer electrode with improved capacitance performance*

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**Tingxuan Yang**

*Discovery of New Narrow-Band Phosphors*

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**Fanglei Tong**

*Mg anode for Mg air battery*

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**Ramin Razmi**

*Spray drying process modeling : Evolving a digital twin*

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**Michael Lim**

*Hybrid Anaerobic Membrane Bioreactor for low-strength wastewater*

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