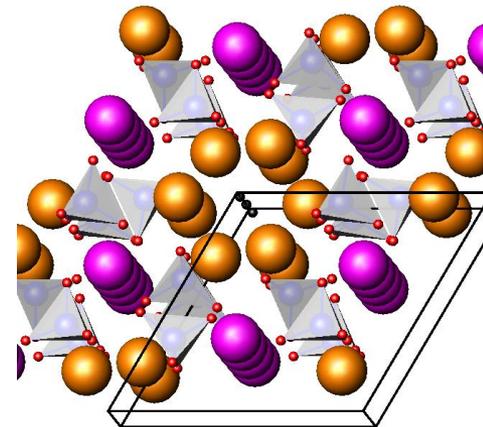


# FYP Research Projects on Nano-Structured Metallic and Ceramic Functional Materials

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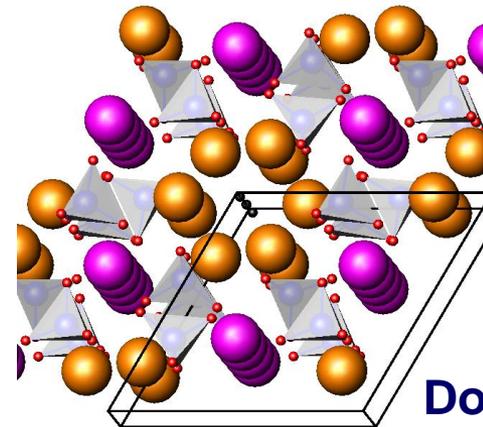
**E-mail: [zldong@ntu.edu.sg](mailto:zldong@ntu.edu.sg)**



# Prerequisite

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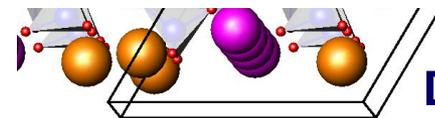
- Hardworking
- Teamwork spirit
- Understand basics of both materials chemistry and materials physics
- Understand basics of scanning electron microscopy and powder x-ray diffraction, or eager to learn the techniques
- NO CGPA requirement



# Tentative FYP Projects: 2019-2020

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- Synthesis and applications of polyoxometalates  
1 FYP student (MSE project)
- XRD/SEM characterization of MOF with catalytic activities  
1 FYP students (Bath University – MSE project)
- Non-destructive residual stress analysis of surface treated bearing steels  
1 FYP student (ARTC A\*STAR – MSE project)
- Processing-microstructure-property relationship of 3D printed metallic component  
1 FYP student (Simtech A\*STAR – MSE project)
- Molecular Dynamics Simulations of Deformation and Failure of Metal Alloys  
1 FYP students (IHPC A\*STAR - MSE project)



# Assessment

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The following components may contribute to the final grade of your FYP work

- Hardworking / discussions when needed / bimonthly report (end Sept 1 page; end Nov 1-2 pages; end Jan 2 pages; March Final report)
- Teamwork spirit/ motivated to learn lab skills to prepare for your future careers / respect lab technicians / lab safety (please label or dispose chemicals properly; please keep lab clean and tidy.)
- Results reasonable
- Final report well presented

