

AY 2009/10 SEM 2 FYP 491/493 PROJECT LISTING

No.	Title	Name	Official Email	Contact	(CBC 491)	(CBC 493)
1	Asst Prof	So Cheuk Wai	Cwso@Ntu.Edu.Sg	65132730	Synthesis And Reactivity Of Metal Bis-Phosphorus-Stabilized Carbene Complexes (Cbc 491) Synthesis Of Heterobimetallic Catalysts(Cbc 491) Synthesis And Reactivity Of Base-Stabilized Low Valent Silicon Complexes (Cbc 491)	Synthesis Of Metal Bis-Phosphorus-Stabilized Carbene Complex(Cbc 493) Synthesis Of N-Heterocyclic Carbene Containing Anionic Substituent (Cbc 493) Synthesis Of Novel Geminal Dianionic Ligand(Cbc 493)
2	Asst Prof	Richard David Webster	Webster@Ntu.Edu.Sg	63168793	Measuring Trace Contaminants In Water And Atmospheric Samples Using Icp And Gc-Ms.(Cbc 491) Electrochemistry Inside Lipids.(Cbc 491) The Development Of Polymer Membrane Ion-Selective Electrodes Using Novel Heterocyclic Compounds.(Cbc 491) Infrared Spectroscopy Of Reduced Forms Of Vitamin K.(Cbc 491)	Measuring Trace Contaminants In Water And Atmospheric Samples Using Icp And Gc-Ms.(Cbc 493) Electrochemistry Inside Lipids.(Cbc 493) The Development Of Polymer Membrane Ion-Selective Electrodes Using Novel Heterocyclic Compounds.(Cbc 493) Infrared Spectroscopy Of Reduced Forms Of Vitamin K.(Cbc 493)
3	Asst Prof	Hong Soon Hyeok	Hongsh@Ntu.Edu.Sg	65132747	Development Of Homogeneous Catalysts Using Carbene Ligands(Cbc 491)	Development Of Homogeneous Catalysts Using Carbene Ligands(Cbc 493)
4	Asst Prof	Zhou Jianrong	Jrzhou@Ntu.Edu.Sg	65132726	Asymmetric Hydrogenation Of Ketones And Imines (Cbc 491) New Rhodium Complexes For Asymmetric Carbene And Nitrene Transfer Reactions(Cbc 491) Asymmetric Olefin Epoxidation (Cbc 491) New Aryne Chemistry (Cbc 491) Asymmetric Friedel-Crafts Reaction (Cbc 491) Asymmetric Addition Of Carbon Dioxide To Olefins (Cbc 491)	
5	Asst Prof	Chi Yonggui Robin	Robinchi@Ntu.Edu.Sg	65927769	Design And Synthesis Of Organic Catalysts To Achieve New Or More Efficient Transformations (Cbc 491) Model Peptides In Directed Organic Catalysis Under Biocompatible Conditions(Cbc 491) Methods For The Rapid Preparation Of Diverse Catalyst Libraries Via New Catalytic Reactions(Cbc 491) Development Of Asymmetric Acid Base Bifunctional Catalysts And Their Applications(Cbc 491) One-Pot Cascade And Sequential Reactions Enabled By Multiple Normally Incompatible Catalysts(Cbc 491)	Mechanistic Studies Of Catalytic Reactions(Cbc 493)
6	Asst Prof	Brendan Patrick Orner	Orner@Ntu.Edu.Sg	63168757	Application Of Nanocage Proteins To The Synthesis Of Nano-Scaled Materials(Cbc 491) Alanine Scanning Studies Of Nanocage Proteins To Determine Key Residues Governing Protein-Protein Interactions(Cbc 491) Design Of Nanocage Proteins To Determine Key Protein-Protein Interactions Based On Computational Prediction(Cbc 491)	Application Of Nanocage Proteins To The Synthesis Of Nano-Scaled Materials(Cbc 493) F Nanocage Proteins To Determine Key Residues Governing Protein-Protein Interactions(Cbc 493) Design Of Nanocage Proteins To Determine Key Protein-Protein Interactions Based On Computational Prediction(Cbc 493)
7	Dr	Chua Guan Leong	Guanleong@Ntu.Edu.Sg	63168903	Metal Catalyzed Coupling Reactions In Water(Cbc 491)	Metal Catalyzed Coupling Reactions In Water(Cbc 493)
8	Assoc Prof	Zhong Guofu	Guofu@Ntu.Edu.Sg	63168761	Development Of New Organocatalytic Reactions(Cbc 491) Design And Application Of New Organocatalysts In Asymmetric Reactions (Cbc 491) Application Of Asymmetric Organocatalysis In The Synthesis Of Bioactive Molecules (Cbc 491)	Development Of New Organocatalytic Reactions(Cbc 493) Design And Application Of New Organocatalysts In Asymmetric Reactions (Cbc 493) Application Of Asymmetric Organocatalysis In The Synthesis Of Bioactive Molecules (Cbc 493)
9	Prof	Kim Sung Gak	Sgkim@Ntu.Edu.Sg	65927765	Triflic Acid Promoted Organic Reactions(Cbc 491) Gold-Catalyzed Functionalization Of Alkynes(Cbc 491)	
10	Asst Prof	Chiba Shunsuke	Shunsuke@Ntu.Edu.Sg	65138013	Catalytic Synthesis Of Azaheterocycles Using Vinyl Azides(Cbc 491) Mn(II)-Mediated Reactions Of Vinyl Azides And Cyclopropanols(Cbc 491) Development Of [3+2]-Cycloaddition Of Vinyl Azides(Cbc 491) Synthesis Of One-Carbon Shorter Nitriles From Carboxylic Acids(Cbc 491)	Catalytic Synthesis Of Azaheterocycles Using Vinyl Azides(Cbc 493) Mn(II)-Mediated Reactions Of Vinyl Azides And Cyclopropanols(Cbc 493) Development Of [3+2]-Cycloaddition Of Vinyl Azides(Cbc 493) Synthesis Of One-Carbon Shorter Nitriles From Carboxylic Acids(Cbc 493)
11	Asst Prof	Roderick Wayland Bates	Roderick@Ntu.Edu.Sg	63168907	The Metathesis-Michael Approach To Tetrahydropyrans(Cbc 491) Studies Towards Guaianolide Synthesis(Cbc 491) Synthesis Of Pandan Alkaloids(Cbc 491) An Imda Approach To Biaryls(Cbc 491) Synthesis Of Paulonine(Cbc 491)	The Metathesis-Michael Approach To Tetrahydropyrans(Cbc 493) An Imda Approach To Biaryls(Cbc 493) Synthesis Of Pandan Alkaloids(Cbc 493) Synthesis Of Paulonine(Cbc 493)
12	Prof	Francois Mathey	Fmathey@Ntu.Edu.Sg	65132731	The Use Of Phosphines With Internal Charge Transfer In Homogeneous Catalysis(Cbc 491) New Organophosphorus Materials For Optoelectronic Applications(Cbc 491) Looking For Phosphonium Ions, New 6-Pi Aromatic Species(Cbc 491)	Modulation Of The Electronic Properties Of Polyacetylene By Phosphorus Substituents(Cbc 493) New Reactions Of The Carbene-Like Phosphinidene Complexes(Cbc 493) New Types Of Stable Phosphinous Acids For Asymmetric Catalysis(Cbc 493)
13	Prof	Loh Teck Peng	Teckpeng@Ntu.Edu.Sg	65138474	Metal-Free Coupling Reactions(Cbc 491) Total Synthesis Of Biologically Active Natural Products(Cbc 491) Chiral Catalysts For C-C Bond Formation Reactions(Cbc 491) New Organo Iridium Complexes For Organic Transformations(Cbc 491) New Coupling Reactions For Organic Synthesis(Cbc 491)	Metal-Free Coupling Reactions (I)(Cbc 493) Total Synthesis Of Biologically Active Natural Products (I)(Cbc 493) Chiral Catalysts For C-C Bond Formation Reactions (I)(Cbc 493) New Organo Iridium Complexes For Organic Transformations (I)(Cbc 493) New Coupling Reactions For Organic Synthesis (I)(Cbc 493)
14	Prof	Leung Pak Hing	Pakhing@Ntu.Edu.Sg	65138470	Development Of Novel Phosphine Catalysts(Cbc 491) 1)Asymmetric Ligand Transformation Reactions(Cbc 491) 2)Metal Template Promoted Asymmetric Reactions(Cbc 491)	1)Development Of Novel Phosphine Catalysts(Cbc 493) 2)Asymmetric Ligand Transformation Reactions(Cbc 493) 3)Metal Template Promoted Asymmetric Reactions(Cbc 493)
15	Asst Prof	Phillip Wai Hong Chan	Waihong@Ntu.Edu.Sg	63168760	Investigating Homogenous Lewis Acid Catalysis As Efficient Green Synthetic Strategies To Accessing Heterocyclic Compounds 1(Cbc 491) Lewis Acid-Catalyzed Reactions Of Alcohol Pre-Electrophiles For Developing New Green C-C And C-N Bond Formation Strategies 1(Cbc 491) Investigating Homogenous Lewis Acid Catalysis As Efficient Green Synthetic Strategies To Accessing Heterocyclic Compounds 2(Cbc 491) Lewis Acid-Catalyzed Reactions Of Alcohol Pre-Electrophiles For Developing New Green C-C And C-N Bond Formation Strategies 2(Cbc 491)	Investigating Homogenous Lewis Acid Catalysis As Efficient Green Synthetic Strategies To Accessing Heterocyclic Compounds 1(Cbc 493) Lewis Acid-Catalyzed Reactions Of Alcohol Pre-Electrophiles For Developing New Green C-C And C-N Bond Formation Strategies 1(Cbc 493) Investigating Homogenous Lewis Acid Catalysis As Efficient Green Synthetic Strategies To Accessing Heterocyclic Compounds 2(Cbc 493) Lewis Acid-Catalyzed Reactions Of Alcohol Pre-Electrophiles For Developing New Green C-C And C-N Bond Formation Strategies 2(Cbc 493)
16	Asst Prof	Naohiko Yoshikai	Nyoshikai@Ntu.Edu.Sg	65927768	Exploration Of Catalytic C-H Bond Activation/C-C Bond Formation Reactions(Cbc 491) Design, Synthesis, And Application Of Multidentate Ligands For Transition Metal Catalysis(Cbc 491) Development Of Transition Metal-Catalyzed Addition Of Organometallic Reagents To Unsaturated Hydrocarbons(Cbc 491)	Exploration Of Catalytic C-H Bond Activation/C-C Bond Formation Reactions(Cbc 493) Design, Synthesis, And Application Of Multidentate Ligands For Transition Metal Catalysis(Cbc 493) Development Of Transition Metal-Catalyzed Addition Of Organometallic Reagents To Unsaturated Hydrocarbons(Cbc 493)
17	Dr	Wong Lai Yoong	Laiyoong@Ntu.Edu.Sg	63168792	Cp*Ir(Thiolate) Chemistry (I)(Cbc 491) Cp*Ir(Thiolate) Chemistry(II)(Cbc 491) Organoruthenium Chemistry(Cbc 491)	
18	Asst Prof	Zhang Dawei	Zhangdw@Ntu.Edu.Sg	65137367	Study Protein Secondary Structure Based On Polarized Force Field(Cbc 491) Calculate Receptor-Drug Binding Affinity With Mm-Pbza Approach(Cbc 491) Protein Folding Based On Charge Update Model(Cbc 491)	Virtual Screening Based On Relaxed Complex Scheme(Cbc 493)
19	Asst Prof	Motoki Yamane	Yamane@Ntu.Edu.Sg	65138014	Rhodium-Catalyzed C-C Bond Formation Reaction(Cbc 491) Rhodium-Catalyzed Reaction With Organosilicon Compounds(Cbc 491) Preparation Of Carbonyl Compounds Mediated By Group VI Metal Complex(Cbc 491)	Rhodium-Catalyzed C-C Bond Formation Reaction(Cbc 493) Rhodium-Catalyzed Reaction With Organosilicon Compounds(Cbc 493) Preparation Of Carbonyl Compounds Mediated By Group VI Metal Complex(Cbc 493)
20	Assoc Prof	Park Cheol-Min	Cmpark@Ntu.Edu.Sg	65132748	Transition Metal Mediated Cyclization Reactions(Cbc 491) Functional Modulation Of Proteins Through Small Organic Molecules(Cbc 491)	Transition Metal Mediated Cyclization Reactions(Cbc 493) Functional Modulation Of Proteins Through Small Organic Molecules(Cbc 493)
21	Assoc Prof	Yeow Kok Lee Edwin	Edwinyeow@Ntu.Edu.Sg	6316 8759	The science of macromolecules at the single-molecule level (491) Understanding fundamental processes in molecule devices (491) Nano-science through the eyes of a chemist (491)	The science of macromolecules at the single-molecule level (493)
22	Asst Prof	Liu Xuewei	Xuewei@Ntu.Edu.Sg	6316 8901	Carbohydrate Incorporated N-Heterocyclic Carbenes (491) New glycosylation approach for oligosaccharide synthesis (491) Design and synthesis of new chemical entities as ER antagonists (491)	Carbohydrate Incorporated N-Heterocyclic Carbenes (493) New glycosylation approach for oligosaccharide synthesis (493) Design and synthesis of new chemical entities as ER antagonists (493)
23	Asst Prof	Chen Hongyu	Hongyuchen@Ntu.Edu.Sg	6316 8795	Controlling linear and globular organization of polymer-encapsulated gold nanoparticles in solution (491) Development of polymer-encapsulated gold nanoparticles as surface-enhanced Raman scattering probes (491) Study of manganese-terpyridine complexes as water-oxidation catalysts (491)	Controlling linear and globular organization of polymer-encapsulated gold nanoparticles in solution (493) Development of polymer-encapsulated gold nanoparticles as surface-enhanced Raman scattering probes (493) Study of manganese-terpyridine complexes as water-oxidation catalysts (493)
24	Asst Prof	Phan Anh Tuan	Phantuan@Ntu.Edu.Sg	65141915	Structure of quadruplex DNA- small molecule complexes (491) Interaction of quadruplex DNA and RNA with small molecules (491) Structure of quadruplex DNA formed by variant telomeric sequences (491) G-rich oligomers as HIN IN inhibitors (491) Manipulation G-quadruplex topologies (491)	HIV IN: synthesis and inhibitor screening (493) Interaction of HMG protein with DNA basic site (493) Structure of G-quadruplex in the promoter of human telomerase (493) Structure of human telomeric G-quadruplexes (493)
25	Asst Prof	Tan Howe Siang	Howesiang@Ntu.Edu.Sg	6316 2987	Ultrafast nonlinear optical spectroscopy (491) Femtosecond laser pulse shaping using nonlinear optics (491)	Ultrafast nonlinear optical spectroscopy (493) Femtosecond laser pulse shaping using nonlinear optics (493)
26	Assoc Prof	Li Tianhu	Tli@Ntu.Edu.Sg	6513 7364	Design and synthesis of circular DNA containing human telomere sequences using radioactive 32P labeling (491) Development of new types of topological structures of DNA using radioactive 32P labeling (491) Construction of novel circular structures of oligonucleotides using radioactive 32P labeling (491)	Design and synthesis of circular DNA containing human telomere sequences using radioactive 32P labeling (493) Development of new types of topological structures of DNA using radioactive 32P labeling (493) Construction of novel circular structures of oligonucleotides using radioactive 32P labeling (493)
27	Prof	Lee Soo Ying	SooYing@ntu.edu.sg	65138466	Conformational Analysis with 1H and 13C NMR Chemical Shift: A Computational Chemistry Approach Density Functional Theory method to study weak van der Waals complexes and clusters	
28	Asst Prof	Xing Bengang	Bengang@ntu.edu.sg	63168758	Design and preparation of photoactive bioluminescent probes for real-time imaging enzyme activity Multiple functional nano-materials to monitor the drug delivery and tumor therapy Metal nanoparticles based colorimetric bioassay for screening enzyme activity and inhibition.	Design and synthesis of enzyme activatable prodrug conjugates Short peptide based hydrogels for drug delivery Fluorescent semi-conductor nanocomplexes for bacterial detection
29	Prof	Koichi Narasaka	Narasaka@ntu.edu.sg	63168900	Hydroquinone derivatives as electron transfer catalysts Reactions of 2-Alkylidene Thietanes Cu(I) complexes as electron transfer catalysts	Hydroquinone derivatives as electron transfer catalysts Reactions of 2-Alkylidene Thietanes Cu(I) complexes as electron transfer catalysts