

Notice to the Level 3/4 Students

C 4273 - Research Methods in Chemistry

Research Project Titles

For the 2016/2017 Research Methods Group

Please note that the research topics are now available in the notice board and also displayed in the college website ([Link http://www.ichemc.edu.lk/ccs/students/](http://www.ichemc.edu.lk/ccs/students/))

Accordingly you can go through this list carefully and select a suitable project and the supervisor to guide and monitor your project. Subsequently you communicate with your supervisor, discuss about the project, then fill the form and obtain his/her consent to carry out the project by getting him/her to sign [the supervisor selection form](#). (You can download this form from the college website or collect it from the IChem office.) Thereafter you should submit this duly completed form to the Coordinator Research Methods on or before **April 29, 2016**.

All applicants are requested to attend a meeting organized to discuss this matter on **April 29, 2016 at 10.00 am** at the IChem premises. If you fail to attend this meeting (without obtaining prior permission from the Coordinator) you will **be made ineligible** to follow this course.

For the 2015/2016 Research Methods Group

There will be a compulsory meeting on **April 29, 2016 at 1.00 pm** at the IChem premises to discuss the progress of your research and future plans/deadlines.

All Other Current Level 3 Students

If you have already done the literature survey or seminar presentations and fulfill the eligibility criteria to follow the research methods course you are provided with the opportunity to register to follow this course (C 4273) and do a research project. If interested please contact Dr. C. N.

Ratnaweera, the Coordinator for the research method course before **April 29, 2016**. However, this category of students will be given less priority in selecting a research project.

M. R. M. Haniffa
Dean, College of Chemical Sciences

Dr. C. N. Ratnaweera
Coordinator, Research Methods

C 4273 - Research Projects

#	Title	Supervisor
R1	Develop attractant for paddy bud using paddy / aggregation pheromone/ grass extracts	Prof P. Paranagama
R2	Bioactive compounds in endolichenic fungi isolated from mangrove plants	Prof P. Paranagama
R3	Isolation of anti-inflammatory compounds in <i>Scoparia dulcis</i> (<i>Walkoththamalli</i>)	Prof P. Paranagama
R4	Phytoremediation ability of byproduct of post mushroom substrate.	Prof P. Paranagama
R5	Antibacterial activity of secondary metabolites in mangrove lichen, <i>Roccella montagnei</i>	Prof P. Paranagama
R6	Monitoring air pollution using passive samplers for the city of Colombo.	Prof O. A. Ilepruma
R7	Monitoring acid rain in Colombo.	Prof O. A. Ilepruma
R8	Construction of a solar distiller to purify water	Prof O. A. Ilepruma
R9	Nitrate removal from a paddy husk fired silica material	Prof O. A. Ilepruma
R10	Degradation of industrial effluent using a titanium dioxide photocatalyst.	Prof O. A. Ilepruma
R11	Use of MOFs as sensors	Dr M. Infas
R12	Metal Organic Frameworks for biological applications	Dr M. Infas
R13	Investigating the therapeutic properties of indigenous plants to develop new cosmetics	Dr M. Infas
R14	Investigating the therapeutic properties of indigenous plants to develop new cosmetics	Dr M. Infas
R15	Chemical modifications and characterization of selected bio-chars (Two positions)	Dr S. R. Gunatilake
R16	Removal of Industrial dyes using magnetic bio-char	Dr S. R. Gunatilake
R17	Remediation of pesticide contaminated irrigation water using chemically modified bio-char	Dr S. R. Gunatilake
R18	Antioxidant and anti-inflammatory action of medicinal oils.	Prof S. Wimalasena
R19	Metal ion accumulation in root vegetables growing in marshy areas and water bodies specially in polluted areas e.g. CKD effected areas	Prof S. Wimalasena

R20	Development of a voltametric methodology for determination of trace quantities of Cd in rice /soil ground/surface water	Prof K.A.S. Pathirathne
R21	Investigation of the possibilities of using certain natural plant materials for inhibition of corrosion of steel	Prof K.A.S. Pathirathne
R22	Use of a statistical approach for optimization of instrument operational parameters for flame /furnace AAS	Prof K.A.S. Pathirathne
R23	An investigation on potential errors in calibration curves used in instrumental methods of chemical analysis	Prof K.A.S. Pathirathne
R24	Analysis of problem solving skills of students	Dr C Udawatte Dr U. Jayasundara
R25	pH sensitive and metal lochromic indicators from plant extracts	Dr C Udawatte
R26	Ethnicity based analysis of diabetic patients	Dr C Udawatte
R27	Beer and wine production from rice	Dr C Udawatte
R28	Cosmetics from wood extracts	Dr C Udawatte
R32	Determination of antioxidant activity, antimicrobial activity and heavy metal content in the ayurvedic preparation 'Pinda thailaya'	Dr C Udawatte Dr Kamal Perera
R33	Molecular modeling of binding interactions of coumarin derivatives to aromatase.	Dr C Udawatte Dr C. N. Ratnaweera
R35	Cost effective domestic water purification system for CKDU affected areas	Dr S. Weliwegamage
R36	Dye sensitized thin film solar sells	Dr S. Weliwegamage
R37	Construction of a rechargeable galvanic cell	Dr S. Weliwegamage
R38	Preparation of biodiesel based on non-food crops	Dr S. Weliwegamage
R39	Evaluation of fuel quality parameters for biodiesel types	Dr S. Weliwegamage
R40 R41	Molecular docking and dynamics to study drug receptor interactions (two projects)	Dr C. N. Ratnaweera
R42	Internal rotors theoretical studies	Dr C. N. Ratnaweera
R43	Natural dies and adsorption to fabric	Dr C. N. Ratnaweera
R44	Comparative study on different maturing stages of jack fruit	Dr Gopika/ Dr D. Udukala
R45	Comparative study on antidiabetic activity of jaggery made from palmyrah and kithul.	Dr D. Udukala

R46	Antioxidative activities of cynometra cauliflora (Nam nam) in Sri Lanka	Dr D. Udukala
R47	Determination the influence of fluorescence whitening (FW) on sun protection factor (SPF)	Dr U. K. Jayasundara
R48	Determination of heavy metal levels in soil samples in the cities and villages using AAS	Dr U. K. Jayasundara
R49	Determination of heavy metal levels (Cu, Fe, Pb, and Zn) in fruit juice and soft drinks	Dr U. K. Jayasundara
R50	Non GLP method validation of tyrosine intermediate using UV-Vis spectroscopy (SLINTEC collaborated project)	Dr U. K. Jayasundara Dr L. Weerasinghe
R51	Chemical modification of banana pseudo stem fibers with fatty acids and their application as a sorbent in oil-spill clean up	Dr Ireshika De Silva Dr S. R. Gunatilake
R52	Isolation of endophytic fungi from herbal medicinal plants and evaluation of their antibacterial activity	Dr Ireshika De Silva Dr D. Udukala
R53	An evaluation of the technical properties of natural rubber vulcanizates carrying graphite powder as a filler material.	Mr Mevan Pieris
R54	Effect of ascorbic acid on benzoic acid in carbonated beverages	Mr E. G. Somapala
R55	Effect of ascorbic acid on benzoic acid in ready to serve fruit beverages	Mr E. G. Somapala
R56 R57	Development of portable analytical tools with smart phones	Dr M. N. Kaumal Dr C. N. Ratnaweera
R58	Comparison of <i>Mesua ferra</i> (Na) and its substitute <i>Nelumbo nucifera</i> (Nelum) in Ayurveda	Dr. Lakshmi Arambewela
R59	Comparison of native <i>Nymphaea nouchali</i> (new national flower) growing in different parts of Sri Lanka.	Dr. Lakshmi Arambewela
R60	Studies on <i>Andrograhis paniculata</i> (Kirata) cultivated in Sri Lanka	Dr. Lakshmi Arambewela