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CURRICULUM VITAE TEMPLATE

Guidance notes for completing CV template (please delete notes section prior to publication/printing)

1. Insert or paste information at the sections in the template as indicated
2. Under experience, recent publications, presentations, and consultancy please list most recent first
3. With the exception of qualifications sections, please provide information for a maximum of the last ten years

Name:	G. Roshan Deen
Title:	Lecturer in Chemistry
Start date with RCSI Bahrain:	3/10/2019
Department:	School of Medicine
Specialty:	Chemistry and Materials Science

Third Level Education:

Date Awarded	Awarding Institution:	Qualification Title:
2001	Nanyang Technological University, Singapore.	PhD (Polymer Science)
1997	Nanyang Technological University, Singapore.	MSc (Materials Science)
1993	Anna University, India.	MSc (Applied Chemistry)
1991	University of Madras, India.	BSc (Chemistry)

Academic Awards:

2018	Outstanding Mentor Award, Gifted Education Branch, Ministry of Education, Singapore.
2018	Dedicated Partner Award, National Junior College, Singapore.
2017	Distinguished Partner Award, Anderson Junior College, Singapore.
2017	Partner Award, National Junior College, Singapore.
2013	Friend of Anderson Award, Anderson Secondary School, Singapore.
2007 - 2008	Danish Medical and Health Science Research Council Fellowship, Denmark.
2005 - 2007	Danish Natural Science Research Council Fellowship, Denmark.
2003 - 2004	Research Fellowship, Rutgers University, USA.
2001 - 2003	Research Fellowship, University of Mainz, Germany.
1997 - 2000	Research Scholarship, Nanyang Technological University, Singapore.
1994 - 1996	Research Scholarship, Nanyang Technological University, Singapore.
1988	Jawaharlal Nehru Science Talent Award for Outstanding Science Student, India.

Previous Academic Positions:

Date (To - From):	Institution:	Position:
2008 - 2019	Nanyang Technological University, Singapore.	Assistant Professor
2005 - 2008	Aarhus University, Denmark.	Research Assistant Professor
2003 - 2004	Rutgers University, USA.	Research Associate
2001 - 2003	University of Mainz, Germany.	Research Scientist

Teaching Experience:

More than 10 years of university teaching of post-graduate, undergraduate, diploma and in-service courses in physical and biological sciences. Has taught the following courses: Physical Chemistry, Bioinorganic and Bioorganic Chemistry, Molecular Spectroscopy, Polymer Chemistry, Biomaterials, Materials Chemistry, Chemistry of Daily Life, Soft Condensed Matter, and Teaching of Chemistry.

Current Research and Scholarly Activities:

Development of novel 'smart' polymers for biomedical applications, self-emulsifying nano-drug delivery systems, anti-microbial surfaces, and magnetic colloids. Organic synthesis and advanced polymerization methods in the development of new materials for versatile applications.

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Summary of Publication History: (Last 10 years only)

Publication Details (Peer-Reviewed International Journals:

1. Medwal, R., Gautam, S., Gupta, S., Chae, K., Asokan, K., Roshan Deen, G., Rawat, R.S., Katiyar, R., & Annapoorani, S (2018). Self-stabilized carbon-L10 Fe Pt nanoparticles for heated dot recording media. *IEEE Magnetics Letters*, 9 DOI. 10.1109/LMAG.2018.2840990.
2. Wang, J., Tian, L., Luo, B., Ramakrishna, S., Kai, D., Loh, X.J., Yang, I.H., Roshan Deen, G., & Mo, X, (2018). Engineering PCL/lignin nanofibers as an antioxidant scaffold for the growth of neuron and Schwann cell. *Colloids and Surfaces B: Biointerfaces*, 169, 356-365.
3. Mah, C.H., Wu, Q.Y., & Roshan Deen, G. (2018). Effect of nature of chemical crosslinker on swelling and solubility parameter of a new stimuli-responsive cationic poly (N-acryloyl-N'-propyl piperazine) hydrogel. *Polymer Bulletin*, 75 (1), 221-238.
4. Roshan Deen, G., & Loh, X.J. (2018). Stimuli-responsive cationic hydrogels in drug delivery applications. *Gels*, 4, 1-13.
5. Mortensen, H.G., Madsen, J.K., Andersen, K.K., Vosegaard, T., Roshan Deen, G., Otzen, D.E., & Pedersen, J.S. (2017). Myoglobin and alpha lactalbumin form smaller complexes with the biosurfactant rhamnolipid than with SDS. *Bio Physical Journal*, 113, 2621-2633.
6. Yang, D.P., Linn Oo, M.N.N., Roshan Deen, G., Li, Z., & Loh, X.J. (2017). Nano-star-shaped polymers for drug delivery applications. *Macromolecular Rapid Communication*, DOI: 10.1002/marc.201700410.
7. Loh, X.J., Lee, T.C., Dou, Q., & Roshan Deen, G. (2016). Utilising inorganic nanocarriers for gene delivery. *Biomaterials Science*, 4, 70-80.
8. Roshan Deen, G., & Mah, C.H. (2016). Influence of external stimuli on the network properties of cationic poly(N-acryloyl-N'-propyl piperazine) hydrogels. *Polymer, 89*, 55-68.
9. Roshan Deen, G., Teo, T.W., & Lee, K.F. (2016). New stimuli-responsive polyampholyte: Effect of chemical structure and composition on solution properties and swelling mechanism. *Polymer, 104*, 91-103.
10. Roshan Deen, G., & Chua, V. (2015). Synthesis and properties of new stimuli-responsive nanocomposite hydrogels containing silver nanoparticles. *Gels, 1*, 117-134.
11. Roshan Deen, G., & Pedersen, J.S. (2015). Investigation on the structure of temperature responsive N-isopropylacrylamide microgels containing a new hydrophobic crosslinker. *Cogent Chemistry, 1*, 1-15.
12. Roshan Deen, G., Lim, Z.L., Mah, C.H., Tng, S.Q., Monisha, S., Lim, Y.Q., & Loh, X.J. (2015). Network Structure and Congo Red Dye Removal Characteristics of New Temperature Responsive Hydrogels. *Separation Science and Technology, 50*, 64-71.
13. Khalid, M., Mujahid, M., Amin, S., Rawat, R. S., Nusair, A., & Roshan Deen, G. (2013). Effect of surfactant and heat treatment on morphology, surface area and crystallinity in hydroxyapatite nanocrystals, *Ceramic International, 39*(1), 39-50, 1.789.
14. Roshan Deen, G., & Santha, S. (2013). Influence of a new stiff crosslinker on the swelling of poly(N-isopropyl acrylamide-co-sodium acrylate) hydrogels and silver nanocomposites.. *International Journal of Polymeric Materials and Polymeric Biomaterials, 62*, 1-7.
15. Roshan Deen, G., Quah, L.Z., Mah, C.H., & Loh, X.J. (2013). Influence of multiple stimuli on the lower cirtical solution temperature of new cationic poly(N-acryoyl-N'-ethyl piperazine-co-N-isopropylacrylamide) solutions. *Journal of Polymer Science Part B: Polymer Physics, 51*, 1175-1183.
16. Ye, E., Roshan Deen, G., & Loh, X.J. (2013). Thermogelling copolymers for medical applications. *Journal of Molecular and Engineering Materials, 1*, 1330002-19.
17. Roshan Deen, G. (2012). Solution properties of water-soluble "smart" poly(N-acryloyl-N'-ethyl piperazine-co-methyl methacrylate). *Polymers, 4*, 32-45.
18. Hirun, N., Bao, H., Li, L., Roshan Deen, G., & Tantishaiyakul, V. (2012). Micro DSC, rheological and NMR investigations of the gelation of gallic acid and xyloglucan. *Soft Matter, 8*, 3258-3268.
19. Jensen, G.V., Shi, Q., Roshan Deen, G., Almdal, K., & Pedersen, J.S. (2012). Structure of PEP-PEO Block Copolymer Micelles: Effect of Changing Solvent and PEO Length and Comparison to a Thermodynamic Model. *Macromolecules, 45*, 430-440.
20. Kong, J.F., Lipik, V., Abadie, M.J.M., Roshan Deen, G., & Venkatraman, S.S. (2012). Characterization and degradation of elastomeric four-armed star copolymers based on caprolactone and L-lactide. *Journal of Biomedical Materials Research Part A, 100A*, 3436-3445.

21. Kong, J.F., Lipik, V., Roshan Deen, G., Abadie, M.J.M., & Venkatraman, S.S. (2012). Effect of End Block Crystallinity on Elastomeric Character of A biodegreadable Thermoplastic Elastomer. *Polymer International, 61*, 43-50.
22. Roshan Deen, G., & Lee, T.T. (2012). New pH-responsive linear and crosslinked functional copolymers of N-acryloyl-N'-phenyl piperazine with acrylic acid and hydroxyethyl methacrylate: Synthesis, reactivity, and effect of steric hindrance on swelling.. *Polymer Bulletin, 69*, 827-846.
23. Roshan Deen, G., Chua, V., & Ilyas, U. (2012). Synthesis, Swelling Properties, and Network Structure of New Stimuli-Responsive Poly(N-acryloyl-N'-ethyl piperazine-co-N-isopropylacrylamide) Hydrogels. *Journal of Polymer Science: Polymer Chemistry, 50*, 3363-3372.
24. Roshan Deen, G., Lim, E.K., Mah, C.H., & Heng, K.M. (2012). New Cationic copolymers and hydrogels of N-vinyl caprolactam and N-acryloyl-N'-ethyl piperazine: Synthesis, reactivity, influence of external stimuli on the LCST and swelling properties. *Industrial and Engineering Chemistry Research, 51*, 13354-13365.
25. Shi Qing, M.K., Chui Ru, M.C., & Roshan Deen, G. (2012). Synthesis and characterization of hydroxylapatite by wet precipitation. *APEC Youth Scientist Journal, 4*, 75-82.
26. Ilyas, U., Rawat, R. S., Roshan Deen, G., Tan, T. L., Lee, P., Springham, S. V., Zhang, S., Fengji, L., Chen, R., & Sun, H. D. (2011). Quenching of surface traps in Mn doped ZnO thin films for enhanced optical transparency. *Applied Surface Science, 258*, 890–897.
27. Jensen, G.V., Shi, Q., Hernansanz, M.J., Oliveira, C.L.P., Roshan Deen, G., Almdal, K., & Pedersen, J.S. (2011). Structure of PEP–PEO block copolymer micelles: exploiting the complementarity of small-angle X-ray scattering and static light scattering. *Journal of Applied Crystallography, 44*, 473–482.
28. Macharaga, G., Rawat, R. S., Roshan Deen, G., Lee, P., Tan, T. L., & Springham, S. V. (2011). TiO2 Nano-cluster Thin Films by Dense Plasma Focus and Ion Implantation Effect on its Photocatalytic Activity. *Journal of Advanced Oxidation Technology, 14*(2), 308-313.
29. Roshan Deen, G., Alsted, T., Richtering, W., & Pedersen, J.S. (2011). Synthesis and characterization of nanogels of poly(N-isopropylacrylamide) by a combination of light and small-angle X-ray scattering. *Physical Chemistry Chemical Physics, 13*, 3108-3114.
30. Roshan Deen, G., Gan, Y.Y., Gan, L.H., & Teng, S.H. (2011). New Functional Copolymers of N-acryloyl-N'-methyl piperazine and 2-hydroxyethyl methacrylate: Synthesis, Determination of Reactivity Ratios and Swelling Characteristics of Gels. *Polymer Bulletin, 66*, 301-313.
31. Jensen, G.V., Bremholm, M., Lock, N., Roshan Deen, G., Jensen, T.R., Iversen, B.B., Niederberger, M., Pedersen, J.S., Birkedal, H. (2010). Anisotropic crystal growth kinetics of anatase TiO_2 nanoparticles synthesized in a non-aqueous medium. *Chemistry of Materials, 22*, 6044-6055.
32. Roshan Deen, G. (2010). Swelling behaviour and metal ion uptake capacity of pH-responsive hydrogel of poly(N-acryloyl-N'-ethyl piperazine). *Journal of Dispersion Science and Technology, 31*, 1673-1678.
33. Roshan Deen, G., & Pedersen, J.S (2010). Nucleation of an oil phase in a non-ionic microemulsion containing chlorinated oil upon systematic temperature quench. *Journal of Physical Chemistry B, 114*, 7769-7776.
34. Roshan Deen, G., & Gan, L.H. (2009). New piperazine-based polymerizable monoquaternary cationic surfactants: Synthesis, polymerization and swelling characteristics of gels. *Journal of Polymer Science: Part A. Polymer Chemistry. 47*, 2059-2072.
35. Roshan Deen, G., Oliveira, C.L.P., & Pedersen, J.S. (2009). Phase Behaviour and Kinetics of phase separation of a non-ionic microemulsion of C12E5/Water/1-chlortetradecane upon a temperature quench. *Journal of Physical Chemistry B, 113*, 7138-7146.
36. Loh, P., Roshan Deen, G., Vollmer, D., Fischer, K., Schmidt, M., Kundagrami, A., & Muthukumar, M. (2008). The collapse of linear polyelectrolyte chains in a poor solvent: When does a collapsing polyelectrolyte collect its counter ions? *Macromolecules, 41*, 9352-9358.

Publications in Scholarly Books:

1. Roshan Deen, G., & Mah, C.H. (2019). "New Piperazine-based Polymerizable Monomers for the Development of Stimuli-Responsive Polymers", In Recent Advances in Materials Research, Nova Science Publisher, New York, USA (in press).
2. Roshan Deen, G. (2018). "Environmental Applications: Hydrogel", In Encyclopedia of Polymer Applications, Mishra, M. (Ed.), Taylor and Francis Group, New York, USA (in press).
3. Roshan Deen, G., Skovgaard, J., & Pedersen, J.S. (2016). "Formation and Properties of Nanoemulsions", In Nanotechnology in the Agri-Food Industry: Emulsions, Grumezescu, A.M. (Ed.), Elsevier Academic Press, London (pp. 193-223).

4. Roshan Deen, G. (2015) “Stimuli-Responsive Cationic Polymers for Biomedical Applications”, In Encyclopedia of Biomedical Polymers and Polymeric Biomaterials, Mishra, M. (Ed.), Taylor and Francis Group, New York, USA (pp. 1334-1343).
5. Roshan Deen, G. Ullas Chandran, P, Rawat, R.S., & Ilyas, U. (2015) “New ‘Smart’ Cationic Interpenetrating Network Hydrogels prepared by a Sequential Approach: Investigation of Stimuli-Responsive Behaviour, Swelling Kinetics, Water Transport Mechanism and Applications”, In Encyclopedia of Biomedical Polymers and Polymeric Biomaterials, Mishra, M. (Ed.), Taylor and Francis Group, New York, USA (pp.4011-4024).
6. Roshan Deen, G. (2015) “Stimuli” Responsive Hydrogels in Petroleum Engineering”, In Advances in Petroleum Engineering II Petrochemicals, Pant, K.K., Sinha, S., & Bajpai, S. (Eds.), Studium Press LLC, Houston, TX77072, USA (pp. 239-247).

Recent Presentations:

1. Mah, C.H., & Roshan Deen, G. (2017, May). “Investigation on the Sorption Mechanism and Selectivity of dyes by a New Cationic Hydrogel”, Fifth International Symposium Frontiers in Polymer Science, Seville, Spain.
2. Roshan Deen, G., Mah, C.H., & Wong, Y.S. (2017, May): “Synthesis and Stimuli-Responsive Behavior of New Cationic Microgels”, Fifth International Symposium Frontiers in Polymer Science, Seville, Spain.
3. Roshan Deen, G., & Pedersen, J.S. (2015, February). “On the Structure of Temperature-Responsive N-isopropylacrylamide Microgels containing Hydrophobic Crosslinker: An Investigation by Scattering Methods”, XII International Conference on Polymers, Paris, France.
4. Lee, P., Rawat, R.S., Springham, S.V., Wong, D.J.S., Tan, A.T., & Roshan Deen, G. (March, 2013). “Plasma Focus as a Multiple Radiation Source”, IPS Meeting, Singapore.
5. Roshan Deen, G., & Mah, C.H. (December, 2013). ”On the Structure of Sterically Stabilized Temperature-Responsive N-vinyl caprolactam Nanogels”, 12th International Conference on Frontiers of Polymers and Advanced Materials, Auckland, New Zealand.
6. Roshan Deen, G., Alsted, T., Pedersen, J.S., & Richtering, W. (December, 2013). “Combination of Light and Small Angle X-ray Scattering for Characterization of Smart Nanogels”, 12th International Conference on Frontiers of Polymers and Advanced Materials, Auckland, New Zealand.
7. Roshan Deen, G., Rawat, R.S., Lee, P. (December, 2013): Development of Novel Functional Surfaces by Plasma Polymerization for Biomedical Applications”, International Conference on Plasma Science and Applications, Singapore.
8. Ilyas, U., Rawat, R.S., Roshan Deen, G., Tan, T.L., Lee, P., Springham, S.V., Chen, Sun, H.D. Fenji, L., & Zhang, S. (April, 2011). “Structural and Photoluminescence Study of Zinc Oxide Thin Films Grown by Laser Induced Plasma”, 5th International Conference on Frontiers of Plasma Physics and Technology, Singapore.
9. Macharaga, G., Rawat, R.S., Roshan Deen, G., Lee, P., T. L. Tan, T.L., & Springham, S.V. (April, 2011). “Photocatalytic Properties of Dense Plasma Focus Deposited Nano Phase TiO2 Thin Films: Annealing Effect”, 5th International Conference on Frontiers of Plasma Physics and Technology, Singapore.
10. Kong, J.F., Lipik, V., Roshan Deen, G., Abadie, M.J.M. & Venkatraman, S. (November, 2011). “Effect of End Block Crystallinity on Elastomeric Character of a Biodegradable Thermoplastic Elastomer”, International Conference on Innovation in Polymer Science, Bali, Indonesia.
11. Roshan Deen, G. & Pedersen, J.S. (November, 2011) “Poly(N-isopropyl acrylamide) Microgels Crosslinked with N,N’-diacryloyl piperazine: Synthesis and Characterization by Scattering Methods”, International Conference on Innovation in Polymer Science, Bali, Indonesia.
12. Jensen, G.V., Shi, Q., Hernansanz, M.J., Oliveira, C.L.P., Roshan Deen, G., Almdal, K., & Pedersen, J.S. (September, 2009). “Contrast Variation Combining SAXS and SLS: Structure Determination of Block Copolymer Micelles”, 14th International Conference on Small Angle Scattering, Oxford, UK.
13. Roshan Deen, G., Oliveira, C.L.P., & Pedersen, J.S. (September, 2009). “Time-Resolved SAXS and Turbidity: Temperature Quench Kinetics of a New Non-ionic Microemulsion”, 14th International Conference on Small Angle Scattering, Oxford, UK.
14. Roshan Deen, G., Aagaard, A.E., Pedersen, J.S., Fatouros, D., & Müllertz, A. (September, 2009). “Investigation of in-situ degradation of Water-insoluble Drug Formulations under Simulated Stomach Conditions on a Laboratory SAXS”, 14th International Conference on Small Angle Scattering, Oxford, UK.
15. Jensen, G.V., Shi, Q., Hernansanz, M.J., Oliveira, C.L.P., Roshan Deen, G., Almdal, K., & Pedersen, J.S. (January, 2009). “Tuning Micelles: A combined SAXS and Light Scattering Study”, 6th Nordic workshop on Scattering from Soft Matter, Aarhus, Denmark.
16. Jensen, G.V., Shi, Q., Hernansanz, M.J., Roshan Deen, G., Almdal, K., & Pedersen, J.S. (February, 2009). “Structure of PEP-PEO Block Copolymer Micelles in Solvents of Varying Selectivity: A Combined SAXS and Light Scattering Study”, 5th Nordic Workshop on Scattering from Soft Matter, Trondheim, Norway.

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Consultancy and other Relevant Activities:

Consultancy

2010 – 2018 Consultant for Ministry of Education, Singapore for content upgrading (Physical Chemistry) for PGDE course.
2014 – 2018 Consultant for Ministry of Education, Singapore for in-service course in Physical Chemistry, Polymers and Nanomaterials for Junior College teachers.

Serving in University Examination Committees

2009 - 2018 Nominated panel member for PhD oral examinations.
University examiner of MSc dissertations.
University examiner of PhD theses.
University examiner for conformation of PhD candidatures.

2015 External examiner of PhD thesis (James Cook University, Australia)

Serving in Professional Committees

2018 Technical program Co-Chair, IRC Science, Engineering and Technology, Singapore.
2017 Coordinator and Organizing committee member, Youth Science Conference, Singapore.
2015 Facilitator and organizing committee member, Department annual retreat, NIE, Singapore.
2014 Public relations and organizing committee member, International Science Education Conference (ISEC), Singapore.
2013 Coordinator and organizing committee member, Fourth international advisory board meeting of the Asian Laser Center (South Korea), Singapore.
2013 Session planner, facilitator, and organizing committee member, International Conference on Plasma Science and Applications, Singapore.
2013 – 2018 Steering committee member, Science Mentorship Program, Ministry of Education, Singapore.
2013 – 2018 Working committee member, Singapore science and engineering fair, Singapore Science Center and Ministry of Education, Singapore.

Administrative Work

2013 - 2018 Institution coordinator for science mentorship program sponsored by the Gifted Education Branch, Ministry of Education, Singapore.
2011 - 2018 Library coordinator.
2009 - 2011 Team facilitator for physics and chemistry infinity group.

Other Professional Service

2015 Judge at Singapore International Science Challenge
2014 Judge at Youth Science Competition for 3M Award
2010 – 2018 Judge at Singapore Science and Engineering Fair
2010 – 2018 Judge at Elementz Science Research Conference and Exhibition
2010 – 2011 Trainer of Singapore team for International Chemistry Olympiad.
2018 Judge for the Undergraduate Awards (Ireland)
2006 – 2018 Reviewer of manuscript for journals published by American Chemical Society, Royal Society of Chemistry, Elsevier, Wiley, Springer, & Pergamon.

Session Chairman at International Conferences

2015 XIII International Conference on Polymers, Paris, France.
2013 International Conference on Plasma Science and Applications, Singapore.
2011 International Conference on Innovation in Polymer Science and Technology, Bali, Indonesia.

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Supervision of PhD Theses

2017 – 2019 Development of natural and synthetics for heavy metal removal from incinerator ash, (Mr. Ganesh Kumar), Role: Main supervisor.
2014 – 2018 Structure-property-application relationship of new stimuli-responsive polymer systems based on N-acryloyl-N'-propyl piperazine,
(Mr. Mah Chin Hao), Role: Sole supervisor.
2012 – 2015 Physical hydrogels of collagen and hyaluronic acid in drug delivery,
(Ms. Meghali Bohra), Role: Co-supervisor.
2010 – 2014 Study of crystalline and amorphous domains of block polymers,
(Mr. Kong Jen Fong), Role: Co-supervisor.
2010 – 2013 Drug delivery systems using liposomes,
(Mr. Jaya Ganesh), Role: Co-supervisor

Supervision of MSc Dissertations

2016 – 2017 Stimuli-responsive hydrogels with sugar-based crosslinkers.
(Ms. Wi Qianyi), Role: Sole supervisor.
2015 – 2016 Synthesis of new piperazine-based monomer,
(Ms. Chen Choon Tow), Role: Sole supervisor.

Professional Memberships

2017 – Present Member of International Association of Advanced Materials
2009 – Present Member of Belgian Particle Colloid and Interface Society
2006 – Present Member of Danish Colloid and Interface Society
2006 – Present Nominated member of Danish Neutron Scattering Society