Professor K. S. D. Perera, B.Sc; Ph.D; F.I.Chem.C.

Curriculum Vitae

Name: K. Sarath D. Perera

Work Address: Department of Chemistry
The Open University of Sri Lanka
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Education:

B. Sc. (General) - First Class Honors in 1981, (*Maths, Chemistry & Physics*).
B. Sc. (Special) in Chemistry - Second Class Upper in 1982.
Ph. D. (Physical Organic Chemistry) in 1989

Present Position: **Senior Professor** in Chemistry (**Personal Chair**).

Profile:

I received my **Ph. D**. (with **Prof. James Grimshaw** on "Electroactive Polymer modified Electrodes" with poly(amino acids), polypyrroles, and polythiophenes) in 1989 from the Queen's University of Belfast, UK. From September 1989 to May 1995, I was a **Research Fellow** at the University of Leeds where I carried out research work in the areas of **Organometallic Chemistry**, **Catalysis** (with **Prof. Bernard L. Shaw, FRS** - *complexes of PO, PN, PP, PNP, PNN, PNS, PNO, PNC, NNC ligands, cyclometallation, agostic interaction, F coordination, CH and CX bond activation and Heck olefination*) and **Boron Chemistry** (with **Prof. John D. Kennedy** – *complexes of* $B_{16}H_{20}$, $B_{18}H_{22}$, *and* $B_{20}H_{16}$ *and thiaboranes*). Then, I joined The Open University of Sri Lanka as a Senior Lecturer in Chemistry (1995-2003), was appointed Head/Department of Chemistry (April 2002 to September 2004). I was promoted to Professor in Chemistry (2003-2011) and then to Senior Professor in Chemistry (November 2011 to date). I have authored about 20 Chemistry Books. I involved in publishing over **75 Scientific Papers** in International refereed Journals with **over 1000 citations** and I have presented about 50 papers in Conferences. I am a recipient of many **Research Fellowships** from University of Leeds (1989-2002) and Trinity College Dublin, Ireland (2005 to 2018, with **Prof. Sylvia M. Draper** – *N- and S-doped*

graphenes, complexes of N-heterosuperbenzene, azafluoranthenes and pyridyl polyphenylenes, and inorganic polymers). I received many **Research Awards** including **CVCD Excellence Award** in 2012 for the Most Outstanding Senior Researcher in Physical Sciences. I was the **Editor-in-Chief** of the **OUSL Journal** of The Open University of Sri Lanka for 3 years (2014-2016).

ResearchGate: Sarath D. Perera; https://www.researchgate.net/profile/Sarath-Perera
Citations **1099**; *h*-index **18**; RG Score **34.67.**

Google Scholar: Sarath D. Perera; Citations **1108**; *h*-index **17**.
https://scholar.google.com/citations?hl=en&user=YA1z0xEAAAAJ

Scholarships/Prizes/Awards:

***Annual Research Award* - 2020** from the Open University of Sri Lanka
***President's Award for Scientific Publication* - 2014**
***Annual Research Award* - 2014** from the Open University of Sri Lanka
***CVCD Excellence Award* - 2012** for the Most Outstanding Senior Researcher in Physical Sciences from the Committee of Vice-Chancellors and Directors (CVCD) of Sri Lanka
***President's Award for Scientific Publication* - 2011**
***Annual Research Award* - 2010** from the Open University of Sri Lanka
***Annual Research Award* - 2009** from the Open University of Sri Lanka
***President's Award for Scientific Publication* - 2007**
***Presidential Award for Research* – 2006**
***Presidential Award for Research* - 2005**
***Presidential Award for Research* - 2004**
***Presidential Award for Research* - 2003**
***Award for Excellence in Research* - 2003** from the Open University of Sri Lanka
***Organic Chemistry Research Prize* - 1986** from the Queen's University, Belfast, UK
ORS Award from the Queen's University, Belfast, UK (**1985-1989**)

Fellowships/Academic Distinctions/Training:

Research Fellow (April **2017** to June **2018**) from the University of Dublin, Ireland
Research Fellow (Sept-Nov **2014**) from the University of Dublin, Trinity College, Ireland
Research Fellow (Sept-Nov **2013**) from the University of Dublin, Trinity College, Ireland
Research Fellow (May-July **2012**) from the University of Dublin, Trinity College, Ireland
Research Fellow (Mar-May **2011**) from the University of Dublin, Trinity College, Ireland
Research Fellow (July-Sept **2009**) from the University of Dublin, Trinity College, Ireland
Research Fellow (Aug-Oct **2008**) from the University of Dublin, Trinity College, Ireland
Research Fellow (April **2005** to March **2007**) from the University of Dublin, Ireland
Participated the program on "Good practices in open and distance learning" conducted by

*Open University Malaysia, Malaysia, 12-16th July, **2004***
Participated the "Distance Education Training Program" conducted by
*Sukhothai Thammathirat Open University, Thailand, 17-25th July, **2004***

Admitted to ***Fellow*** of Institute of Chemistry, Ceylon, **2002**

Research Fellow (July to September **2002**) from the University of Leeds

Visiting Scientist (June to August **2001**) to the University of Leeds

Visiting Scientist (June to August **2000**) to the University of Leeds

Royal Society Visiting Fellow (March to May **1999**) to the University of Leeds

Senior Research Fellow (February to April **1998**) from the University of Leeds

Senior Research Fellow (February to April **1997**) from the University of Leeds

Research Fellow (September **1989** to May **1995**) from the University of Leeds

Publications

I have been involved in publishing over **75 Scientific Papers** in **International Journals**.

About **50 *Abstracts and Extended Abstracts*** have been presented at Conferences/Seminars.

My publications have been cited over 1000 times. You may **download** research articles from ResearchGate.net https://www.researchgate.net/profile/Sarath_Perera2

Publications in Refereed Journals (Sarath D. Perera)

76. Synthesis of silver(I) complexes containing N and P donor ligands, S. D. Perera, OUSL Journal, 2021, **16**(1), 55-74. DOI: http://doi.org/10.4038/ouslj.v16i1.7518
75. Synthesis of platinum(II) complexes of a pyridyl azafluoranthene ligand, S. D. Perera, Rajarata University Journal, 2021, **6**(1), 29-36.
74. Synthesis of cyclometallated Pt(II) complexes of a bulky bipyridine ligand, S. D. Perera, OUSL Journal, 2020, **15**(1), 27-42. http://doi.org/10.4038/ouslj.v15i1.7486
73. Synthesis of homo and heteroleptic Cu(I) complexes with chelating N and P donor ligands, S. D. Perera, Rajarata University Journal, 2020, **5**(1), 29-34.
72. [2+2+2] cyclotrimerisation as a convenient route to 6N-doped nanographenes: a synthetic introduction to the hexaazasuperbenzene family. L. P. Wijesinghe, S. D. Perera, E. Larkin, G. M. Ó Máille, R. Conway-kenny, B. S. Lankage, L. Wang and S. M. Draper, RSC. Adv., 2017, **7**, 24163-67. DOI: 10.1039/c7ra02648j
71. Synthesis of phenanthroline-based polyphenylenes *via* a Diels-Alder cycloaddition reaction. B. S. Lankage, S. D. Perera, and S. M. Draper, Rajarata University Journal, 2015, **3**, 44-53.
70. Methoxy Functionalisation: Exerting Synthetic Control of the Supramolecular and Electronic Structure of Nitrogen-doped nanographenes**.** L. P. Wijesinghe, B. S. Lankage, G. M. Ó Máille, S. D. Perera, D. Nolan, L. Wang and S. M. Draper, J. Chem. Soc., Chem. Commun., 2014, **50**,10637. DOI: 10.1039/C4CC03577A
69. Intriguing Diels-Alder products: chiral centres with an added twist. C. Delaney, S. D. Perera, G. M. Ó Máille and S. M. Draper, J. Chem. Soc., Chem. Commun., 2014, **50**,1599. DOI: 10.1039/c3cc48641a
68. Oxidative bond formation in di-thienyl polyphenylenes: the optical and electrochemical consequences. C. J. Matin, B. Gil, S. D. Perera and S. M. Draper, Eur. J. Org. Chem., 2011, 3491. DOI: 10.1002/ejoc.201100332
67. Synthesis and coordination chemistry of N-doped polyphenylenes. S. D. Perera, R. Quesada and S. M.Draper, OUSL Journal, 2010, **6**, 57-73. DOI: 10.4038/ouslj.v6i0.4114
66. Thienyl directed polyaromatic C-C bond fusions: S-doped hexabenzocoronenes. C. J. Matin, B. Gil, S. D. Perera and S. M. Draper, J. Chem. Soc., Chem. Commun., 2011, **47**, 3616. DOI: 10.1039/c0cc05231k
65. Syntheses and Characterization of the Complexes of molybdenum, tungsten and palladium with 2-diacetylpyridine- (1R)-(-)-fenchone azine. M. Ahmad, I. M. Isa, B. L. Shaw and S. D. Perera. Jurnal Sains dan Matematik, 2010, **2**(1), 56.
64. Coordination chemistry of the benzaldehyde−(1R)−(-)−fenchone azine and derivatives

Fench=NN=C(H)−C_6H_4X (X = H, Cl, Br, OMe or NO_2 in the meta or para positions) with palladium. M. Ahmad, I. M. Isa, B. L. Shaw and S. D. Perera, Jurnal Sains dan Matematik, 2009, **1**(1), 11.

63. Rhodium and palladium complexes of a pyridyl-centred polyphenylene derivative, C. M. A. Ollangnier, S. D. Perera, C. M. Fitchett and S. M. Draper, J. Chem. Soc. Dalton Trans. 2008, 283. DOI: 10.1039/B709818A
62. (Arene)Ru(II) complexes of P-N ligands. S. D. Perera, OUSL Journal, 2007, **4**, 72-77. DOI: 10.4038/ouslj.v4i0.339
61. Macropolyhedral boron-containing cluster chemistry: The unique nido-five-vertex-<B_2>-nido-ten-vertex conjuncto structure of [(η^5-C_5Me_5)$_2$$Rh_2B_{11}H_{15}$] via an unexpected cluster-dismantling Michael J. Carr, Sarath D. Perera, et al., J. Chem. Soc. Chem. Commun. 2007, 3559. DOI: 10.1039/b709470a
60. Macropolyhedral boron-containing cluster chemistry. Cluster opening and B-frame rearrangement in the reaction of $B_{16}H_{20}$ with [{$IrCl_2$(□^{5}-C_5Me_5)}$_2$. Synchrotron X-ray structures of [η^5-C_5Me_5)$_2$$Ir_2B_{16}H_{17}Cl$] and [$\eta^5$-$C_5Me_5$)$_2$$Ir_2B_{16}H_{15}Cl$]. M. J. Carr, S. D. Perera, *etal*, J. Chem. Soc. Dalton Trans. 2006, 5221. DOI: 10.1039/B611734A
59. Macropolyhedral boron-containing cluster chemistry. An unusual 'neo-nido' ten-vertex subcluster configuration in a [$(PPh_3)_2RuB_{16}H_{20}$] species, M. J. Carr, S. D. Perera, *etal*., J. Organomet. Chem., 2005, **690**, 2857. DOI: 10.1016/j.jorganchem.2005.02.027
58. Macropolyhedral boron-containing cluster chemistry: two-electron variations in intercluster bonding intimacy. Contrasting structures of 19-vertex [η^5-C_5Me_5)$HIrB_{18}H_{19}(PHPh_2)$] and [□^{5}-C_5Me_5)$HIrB_{18}H_{18}$ (PH_2Ph)] . S. L. Shea, T. Jelinek, S. D. Perera, B. Stibr, M. Thornton-Pett and J. D. Kennedy, Inorg. Chim. Acta., 2004, **357**, 3119. DOI: 10.1016/j.ica.2004.03.041
57. Macropolyhedral boron-containing cluster chemistry: Ligand-induced two-electron variations of intercluster bonding intimacy. Structures of nineteen-vertex [η^5-C_5Me_5)$HIrB_{18}H_{19}(PMe_2Ph)$] and the related carbene compound [η^5-C_5Me_5)$HIrB_{18}H_{19}${$C(NHMe)_2$}] . S. L. Shea, T. Jelinek, S. D. Perera, B. Stibr, M. Thornton-Pett and J. D. Kennedy, J. Chem. Soc. Dalton Trans. 2004, 1521. DOI: 10.1039/B404322G
56. Intramolecular and supramolecular cluster interactions. S. L. Shea, K. S. D. Perera, *etal*., Boron Chemistry at the beginning of the 21st centuary. 2003, pp 27-35 (chapter in book). DOI: 10.1002/chin.200452245
55. Polyhedral Boron-containing cluster chemistry. Aspects of architecture beyond the icosahedron: Some recent supermolecular and supramolecular developments. S. L. Shea, J. Bould, M. G. S. Londesborough, S. D. Perera, *etal*., Pure Appl. Chem. 2003, **75**, 1239. DOI: 10.1351/pac200375091239
54. Uni-, bi- and ter-dentate complexes formed from $PPh_2CH_2C(R)$=NNHC(=O)Ph (R = Bu^t, Ph) and Pd or Pt. M. Ahmad, S. D. Perera, B. L. Shaw and M. Thornton-Pett. J. Chem. Soc. Dalton Trans. 2002, 1594. DOI: 10.1039/B111079A
53. Aryl halide coordination to Ru(II): Crystal structure of *mer,trans*-[$RuCl_2$ (PPh_3){$PPh_2CH_2C(Bu^t)$=N-N=CH($C_6H_3F_2$-2,6)}]. S. D. Perera, B. L. Shaw and M. Thornton-Pett. Inorg. Chim. Acta., 2001, **325**, 151. DOI: 10.1016/S0020-1693(01)00633-8
52. Activation of C-X (X = Cl or Br) bonds in 2-halobenzaldehydes as their 2-pyridylhydrazone derivatives: Oxidative addition to tungsten(0) to give aryl-tungsten(II) complexes. S. D. Perera, J. J. F. Sanchez and B. L. Shaw. Inorg. Chim. Acta., 2001, **325**, 175. DOI: 10.1016/S0020-1693(01)00644-2
51. Synthesis and spectroscopic characterization of platinum complexes of pyrrole azine phosphine. M. Shamsuddin, S. D. Perera and B. L. Shaw. ACGC Chem. Res. Commun., 2000, **10**, 33.
50. Chelating diphosphine-palladium(II) dihalides; Outstandinly good catalysts for Heck Reactions of aryl halides. B. L. Shaw and S. D. Perera. J. Chem. Soc., Chem. Commun., 1998, 1863. DOI: 10.1002/chin.199852119
49. Highly active, stable, catalysts for the Heck Reaction; Further speculations on the mechanism. B. L. Shaw, S. D. Perera and E. M. Staley. J. Chem. Soc., Chem. Commun., 1998, 1361. DOI: 10.1039/a802642d
48. Synthesis and reactions of ene-hydrazone diphosphine iridium complexes and related species. B. L. Shaw and S. D. Perera. J. Chem. Soc., Dalton Trans., 1998, 2887. DOI: 10.1039/a802073f
47. Complexes of the (1R)-(+)-camphor azine diphosphines Z,Z-3,3'-$Ph_2P^nC_{10}H_{15}$=N-N=$C_{10}H_{15}P^nPh_2$ and Z,Z-3,3'-$Ph_2P^xC_{10}H_{15}$=N-N=$C_{10}H_{15}P^xPh_2$ (x = *exo* ; n = *endo*) with group 6 metal carbonyls: crystal structures of the ligands and *fac*-[$W(CO)_3${$Ph_2P^xC_{10}H_{15}$=N-N=$C_{10}H_{15}P^xPh_2$}] B. L. Shaw, N. Iranpoor, S. D. Perera, M. Thornton-Pett and J. D. Vessey. J. Chem. Soc., Dalton Trans., 1998, 1885.

DOI: 10.1039/A801585F

46 Macropolyhedral boron-containing cluster chemistry. $[PtMe_2(PMe_2Ph)_2]$ as a cluster metallating agent. Isolation and characterisation of nineteen-vertex $[(PMe_2Ph)HPt\text{-}\eta^4\text{-}syn\text{-}B_{18}H_{19}(PMe_2Ph)]$ and eighteen-vertex $[(PMe_2Ph)_2PtS_2B_{15}H_{14}(NHCOMe)]$ P. Kaur, A. Brownless, S. D. Perera, P. A. Cooke, T. Jelinek, J. D. Kennedy, B. Stibr and M. Thornton-Pett.. J. Organomet. Chem., 1998, **557**, 181. DOI: 10.1016/S0022-328X(97)00666-9

45 Some chlorocarbonylruthenium(II) complexes of P,N-donor ligands: Crystal structures of $[RuCl(CO)\{PPh_2CH_2C(Bu^t)=NNH_2\}_2]Cl$ and *fac,cis*-$[RuCl_2(CO)\{PPh_2CH_2C(Bu^t)=N\text{-}N=C(Bu^t)CH_2PPh_2\}]$ U. U. Ike, S. D. Perera, B. L. Shaw and M. Thornton-Pett. Inorg. Chim. Acta., 1998, **279**, 95. DOI: 10.1016/S0020-1693(98)00045-0

44. Chemistry of the azine phosphine ligand *Z,E*-$PPh_2CH_2C(Bu^t)=N\text{-}N=CMe(C_6H_4NO_2\text{-}4)$: Crystal structure of $[Mo(CO)_4\{PPh_2CH_2C(Bu^t)=N\text{-}N=CMe(C_6H_4NO_2\text{-}4)\}]$. S. D. Perera, B. L. Shaw, D. J. Shenton and M. Thornton-Pett. Inorg. Chim. Acta., 1998, **270**, 312. DOI: 10.1016/S0020-1693(97)05864-7

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42. Macropolyhedral boron-containing cluster chemistry. Isolation and characterization of twenty-one-vertex $[(PMe_2Ph)_3HReB_{20}H_{15}Ph(PHMe_2)]$. P. Kaur, S. D. Perera, T. Jelinek, B. Stibr, J. D. Kennedy, W. Clegg and M. Thornton-Pett. J. Chem. Soc., Chem. Commun., 1997, 217. DOI: 10.1039/a607112k

41. Complexes of Cu, Ag and Au with *Z,Z*-$PPh_2CH_2C(Bu^t)=N\text{-}N=C(Bu^t)CH_2PPh_2$ containing nine-membered rings:crystal structure of $[AuCl\{Z,Z\text{-}PPh_2CH_2C(Bu^t)=N\text{-}N=C(Bu^t)CH_2PPh_2\}]$. P. A. Cooke, S. D. Perera, B. L. Shaw, M. Thornton-Pett and J. D. Vessey. J. Chem. Soc. Dalton Trans. 1997, 435. DOI: 10.1039/a606000e

40. A new method of creating coordinative unsaturation: synthesis and reactions of a reactive iridium(I) complex $[Ir(CO)\{PPh_2CH_2C(Bu^t)=N\text{-}N=C(Bu^t)CH_2PPh_2\}]PF_6$: structures of $[Ir(CO)(\eta^2\text{-}L)\{PPh_2CH_2C(Bu^t)=N\text{-}N=C(Bu^t)CH_2PPh_2\}]PF_6$(L = $MeO_2CC{\equiv}CCO_2Me$ or N-Methylmaleamide). S. D. Perera, B. L. Shaw and M. Thornton-Pett. J. Chem. Soc. Dalton Trans. 1996, 3111. DOI: 10.1039/DT9960003111

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