

SHORT CV

Mattheus (Theo) F. A. Goosen

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Date and Place of Birth: 10/25/1950, Amsterdam, Netherlands
Citizenship: Canadian
Marital Status: Married

Education

	School	Advisor	Degree	Date	Field
Undergraduate	University of Toronto, Canada,	Binckeiwicz	B.A.Sc	1975	Chemical Eng.
Graduate	Univ Toronto, Canada,	M. Sefton	Ph.D	1981	Biomaterials Eng
	Univ Toronto, Canada,	M. Sefton	MASc.	1977	Biomaterials Eng
Postdoctoral	Connaught Lab. Ltd, Toronto,	A. Sun	---	1981	Diabetes
<i>Thesis</i>					
<i>Topic</i>	Thromboresistant Materials: Mechanism of Action of Surface-Bound Heparin				
<i>Director of Thesis Work</i>	M. V. Sefton				

Professional Experience (including current appointment)

School/Company/Organization	Title	Dates
Alfaisal University, Riyadh, Kingdom of Saudi Arabia (2008-present) College of Science & General Studies Office Research & Graduate Studies (<i>Founding Assoc VP</i>) (www.alfaisal.edu)	Acting Dean Assoc Vice President	2017-present 2008-present
New York Institute Technology (NYIT), Amman, Jordan (2006-2008) (www.nyit.edu.jo)	Campus Dean/CAO	2006-2008
Universidad del Turabo, PR, USA (2004-2006) School of Science & Technology, <i>Int. Ctr Envir. Studies & Sust. Dev.</i> (http://ciemades.suagm.edu)	Prof & Dean Board of Directors	2004-2006 2005-2007
Areej Vegetable Oils & Derivatives SAOG, Oman	Board of Directors	2003-2004
Oman Agricultural Development Company SAOG, Oman	Board of Directors	2002-2004
American-British Academy, Oman	Board of Directors	2001-2003
Sultan Qaboos University, Muscat, Oman (1994-2004) Dept. Mechanical & Industrial Eng, College of Agricultural and Marine Sciences College of Engineering College of Agricultural and Marine Sciences Department of Bioresource & Agricultural Eng	Professor Prof & Dean Prof & Dean Asst Dean Res Grad Head of Dept	2003-2004 2001-2003 1998-2001 1994-1998 1994-1995
Oxford University, Oxford, UK (1990-1991) (sabbatical) Magdalen College, Biomedical Engineering Research Grp	Visiting Professor	1990-1991
Queen's University, Kingston, Ontario, Canada (1984-1996) Clinical Mechanics Group Chemical Engineering & Applied Chemistry Mattheus F. A. Goosen & Assoc, Consultants in Bioengineering Chemical Engineering & Applied Chemistry Chemical Engineering & Applied Chemistry Chemical Engineering & Applied Chemistry	Principal Investigator Professor President Coord. Grad. Studies Associate Professor Assistant Professor	1993-1996 1992-1996 1989-1996 1988-1992 1987-1992 1984-1987
Connaught Laboratories Limited, Toronto, Ontario, Canada (1981-1984) Islet Transplantation Research Group	Assoc. Res. Scientist NSERC Ind Res Fellow	1984 1981-1984

Courses Taught in Last Ten Years

Undergraduate Introd Chem; Chem & Environment, Instrum & Control Engin (Alfaisal University)

January 2018

AWARDS AND SCHOLARSHIPS

2010	-	Nominated for an <i>ENI Award 2011</i> (The Renewable and Non-Conventional Energy Prize)
1994	-	<i>AIChE Paper of the Month</i> (Chem Eng Progress)
1984	-	<i>H. G. MacMorine Publication Prize</i> - Connaught Labs
1982	-	<i>NSERC - IRF</i>
1980	-	Ogilvie Flour Mills - Kenneth Armstrong Memorial Fellowship
1975-1979	-	NSERC Postgraduate Scholarship
1975	-	CSCHE Achievement Award
1974	-	Dow Chemical of Canada Ltd. Award
1973	-	ARDAGH Scholarship
1970	-	Ontario Scholar

RESEARCH AND SCHOLARLY WORK

SUMMARY:

Google Scholar: h-index 50, number of citations: 9,363 (15 January 2018)

<https://scholar.google.com/citations?user=-VUqA8AAAAAJ&hl=en>

Scopus: h-index 39, 142 documents, 5342 citations

PAPERS:	REFEREED:	138
	CONFERENCE:	51
BOOKS:	EDITED/AUTHORED	11
	CHAPTERS	34
	REVIEWS	1
PATENTS:	ISSUED:	10
	APPLICATIONS:	7
TECHNICAL REPORTS:		5
ABSTRACTS:		43
INVITED LECTURES:		<u>50</u>
	TOTAL	346

FUNDRAISING (RESEARCH) \$23 million USD (2014-2018) Alfaisal University Riyadh KSA

FUNDING (personal)	NO.	AMOUNT (\$US)
GRANTS	39	8,314,640
CONTRACTS	12	<u>1,885,088</u>
TOTAL		<u>10,199,728</u>

Publications (listed chronologically)

JOURNAL ARTICLES

- Faisal, N.H., Ahmed, R., Prathuru, A.K., Katikaneni, S.P., Goosen, M.F.A., Zhang, S.Y., 2017. Neutron Diffraction Residual Strain Measurements of Molybdenum Carbide-Based Solid Oxide Fuel Cell Anode Layers with Metal Oxides on Hastelloy X, *Exp Mech* (2017). 19 pgs. <https://doi.org/10.1007/s11340-017-0298-7>
- Abdelbaki, C., Benchaib, M.M., Benziada, S., Mahmoudi, H. and Goosen, M., 2017. Management of a water distribution network by coupling GIS and hydraulic modeling: a case study of Chetouane in Algeria. *Applied Water Science*, 7(3), pp.1561-1567.
- Ali, O., R. Ahmed, N. H. Faisal, N. M. Al-Anazi, Y. O. Elakwah, M. F.A. Goosen, 2017. Nanoindentation Evaluation of Suspension Thermally Sprayed Nanocomposite WC-Co Coatings, *Key Engineering Materials*, 735, 225-229.
- Ali, O., R Ahmed, NH Faisal, Nayef M Alanazi, L-M Berger, A Kaiser, F-L Toma, EK Polychroniadis, M Sall, YO Elakwah, MFA Goosen, 2017. Influence of Post-treatment on the Microstructural and Tribomechanical Properties of Suspension Thermally Sprayed WC-12 wt% Co Nanocomposite Coatings, *Tribology Letters*, 65 (2), 33.

- Elmeddahi, Y., Mahmoudi, H., Issaadi, A. and Goosen, M.F., 2016. Analysis of treated wastewater and feasibility for reuse in irrigation: a case study from Chlef, Algeria. *Desalination and Water Treatment*, 57(12), pp.5222-5231.
- Benhabiles, O., Mahmoudi, H., Lounici, H. and Goosen, M.F., 2016. Effectiveness of a photocatalytic organic membrane for solar degradation of methylene blue pollutant. *Desalination and Water Treatment*, 57(30), pp.14067-14076.
- Goosen, M.F.A., Mahmoudi, H., Ghaffour, N., Bundschuh, J. and Al Yousef, Y., 2016. A critical evaluation of renewable energy technologies for desalination. In: *Application of Materials Science and Environmental Materials (AMSEM2015) Proceedings of The 3rd International Conference* (pp. 233-258).
- Ghaffour, N., Bundschuh, J., Mahmoudi, H. and Goosen, M.F., 2015. Renewable energy-driven desalination technologies: A comprehensive review on challenges and potential applications of integrated systems. *Desalination*, 356, pp.94-114.
- Bundschuh, J., Ghaffour, N., Mahmoudi, H., Goosen, M., Mushtaq, S. and Hoinkis, J., 2015. Low-cost low-enthalpy geothermal heat for freshwater production: Innovative applications using thermal desalination processes. *Renewable and Sustainable Energy Reviews*, 43, pp.196-206.
- Faisal, N., Ahmed, R., Katikaneni, S., Souentie, S., Goosen, M., 2015. Development of plasma sprayed molybdenum carbide-based anode layers with various metal oxide precursors for SOFC. *Journal of Thermal Spray Technology* 28 (8), pp1415-1428..
- Ashraf, M. A., Ahmed, R., Ali, O., Faisal, N. H., El-Sherik, A. M., & Goosen, M. F. A. (2015). Finite Element Modeling of Sliding Wear in a Composite Alloy Using a Free-Mesh. *Journal of Tribology*, 137(3), 031605.
- Ahmed, R, Alib, O., Faisal, NH, Al-Anazi, NM, Al-Mutairi, S, Toma, FL, Berger, LM, Potthoff, A, Goosen, MFA, 2015 Sliding wear investigation of suspension sprayed WC–Co nanocomposite coatings, *Wear* 322–323, pp133–150
- Ahmed, R., Faisal, N. H., Al-Anazi, N. M., Al-Mutairi, S., Toma, F. L., Berger, L. M., Potthoff, A, Polychroniadis, EK, Sall, M, Chaliampalias, D, & Goosen, M. F. A. (2015). Structure Property Relationship of Suspension Thermally Sprayed WC-Co Nanocomposite Coatings. *Journal of Thermal Spray Technology*, 24(3), 357-377.
- Goosen, M.F.A., Mahmoudi, H. & Ghaffour, N. 2014. Today's and future challenges in application of renewable energy technologies for desalination. *Critical Reviews in Environmental Science & Technology*. 44, 929-999.

An additional 120 other refereed journal papers

BOOKS

- Mahmoudi, H, Ghaffour, N., Goosen, M.F.A. and Bundschuh, J (Eds), 2017. “*Renewable Energy Technologies for Water Desalination*”, CRC Press (Taylor Frances Group) (Balkema NDL), 300 pgs, 15 Chapters ISBN 9781138029170 - CAT# K27597.
- Gottinger, H., and Goosen, M. F. A, (Eds), 2012. “*Strategies of Economic Growth and Catch-up: Industrial Policies and Management*”, Nova Science Publ Inc, Hauppauge, NY (10 Chapters) (ISBN: 978-1-61209-022-1)
- Laboy, E., Goosen, M.F.A. & Emmanuel, E. (Eds), 2010 “*Environmental and Human Health: Risk Management in Developing Countries*”. CRC Press (Taylor & Frances Group) (Balkema NDL) London. 276 pp, ISBN:978-0-415-60162-7
- Laboy, E., Schaffner,F., Abdelhadi, A., & Goosen, M.F.A. (Eds), 2009, “*Environmental Management, Sustainable Development & Human Health*” Taylor & Frances (Balkema NDL) London. 35 Chapt, 594 pp ISBN: 978-0-415-46963-0
- Al-Rawas, A.A. and Goosen, M.F.A. (2006). “*Expansive Soils: Recent Advances in Characterization and Treatment*”, Taylor and Frances (Balkema NDL) London. 34 Chapt, 535 pp ISBN 0-415-39681-6.
- Goosen, M. F. A., Shayya, W. H. (Eds.), 2000. “*Water Management, Purification and Conservation in Arid Climates: Volume 3, Water Conservation*”, Technomic Publishing Co., Inc., Lancaster, Pennsylvania, 336 pp, ISBN No. 1-56676-771-7.
- Goosen, M. F. A., Shayya, W. H. (Eds.), 2000. “*Water Management, Purification and Conservation in Arid Climates: Volume 2, Water Purification*”, Technomic Publishing Co., Inc., Lancaster, Pennsylvania, 358 pp, ISBN No. 1-56676-770-9.
- Goosen, M. F. A., Shayya, W. H. (Eds.), 1999. “*Water Management, Purification and Conservation in Arid Climates: Volume 1, Water Management*”, Technomic Publishing Co., Inc., Lancaster, Pennsylvania, 372 pp, ISBN No. 1-56676-759-8.
- Goosen, M. F. A., (ed.) 1997. "Applications of Chitin and Chitosan". Technomic Publ. Co., Inc., Lancaster, Pennsylvania. 336 pp, ISBN 1-56676-449-1.

- Goosen, M. F. A., (ed.), 1993, "Fundamentals of Animal Cell Encapsulation and Immobilization". CRC Press, Boca Raton, Florida, 326 pp., ISBN: 0-8493-5944-9.
- Goosen, M. F. A., Daugulis, A. J. and Faulkner, P. (eds.), 1993, "Insect Cell Culture Engineering". Bioprocess Technology Series, 17, 250 pp., ISBN:0-8247-8944-X.

PATENTS

- Hommel, M., Sun, A. M. and Goosen, M. F. A., *Droplet Generation*.
Assignee: Connaught Labs. Ltd. U.S. 4,956,128 11 Sep. 1990
- Hommel, M., Sun, A. M., and Goosen, M. F. A., *Production of Small Droplets Including New Injectable Microcapsules Containing Living Tissue or Cells*.
Assignee: Connaught Labs. Ltd. CA 1240815 23 August 1988
CA 1241598 06 September 1988
DE 3484067 07 March 1991
- Goosen, M. F. A., O'Shea, G. M. and Sun, A. M., *Microencapsulation of Living Cells and Tissue for Implantation in Body*.
Assignee: Connaught Labs. Ltd. CA 1215922 30 December 1986
U.S. 4789550 06 December 1988
U.S. 4956128 11 September 1990
- Goosen, M. F. A., King, G. A., Daugulis, A. J. and Faulkner, P., *Multiple Membrane Biocompatible Microcapsules*.
Assignee: Queen's University U.S. 4942129 17 July 1990
- Goosen, M. F. A., O'Shea, G. M. and Sun, M. F., *Microencapsulated Tissue or Cells for Implantation*.
Assignee: Connaught Labs. Ltd. U.S. 4806355 21 February 1989
- Goosen, M. F. A., O'Shea, G. M. and Sun, A. M., *Biocompatible Microcapsules with Macromolecular Core Surrounded by Semipermeable Membrane for Prolonged Release*.
Assignee: Connaught Labs. Ltd. CA 1196862 19 November 1985
U.S. 4673566 16 June 1987
DE 3380788 07 December 1989
- Goosen, M. F. A., O'Shea, G. M. and Sun, A. M., *Encapsulation of Living Tissue or Cells*.
Assignee: Connaught Labs. Ltd. U.S. 4689293 25 August 1987
- Goosen, M. F. A., and Sun, A. M., *Biodegradable Insulin Composition for Injection or Implantation*.
Assignee: Connaught Labs. Ltd. EP 134318 20 March 1985
CA 1196864 19 November 1985
- Goosen, M. F. A., and Sun, A. M., *Slow Release Injectable Insulin Composition*.
Assignee: Connaught Labs. Ltd. U.S. 4492684 08 January 1985
CA 1196863 19 November 1985
- Goosen, M. F. A., O'Shea, G. M. and Sun, A. M., *Microencapsulated Living Tissue and Cells*
Assignee: Connaught Labs. Ltd. U.S. 4487758 11 December 1984

Plus seven patent applications.

Research Interests

Renewable energy, sustainable development, environmental management, economic growth and institutions, microencapsulation, controlled drug delivery technology, biomaterials, cell culture engineering, water purification, production and grey water reuse, solar desalination, humidification-dehumidification, membrane separations, membrane fouling and concentration polarization, reverse osmosis and ultrafiltration

Teaching

- *Introduction to Chemistry 1 and 2* (PCHE101;PCHE12) (Alfaisal University 2013, 2014)
- *Chemistry & Environment CHM 107* (AU 2014)
- *Instrumentation and Control Engineering* (ME 306) (Alfaisal University 2011)
- Biomedical Engineering (SQU Oman and Queen's University, Canada)

30 years teaching experience in Canada, USA, Oman and Saudi Arabia