

SHORT CV

Mattheus (Theo) F. A. Goosen

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

Education

	School	Advisor	Degree	Date	Field
Undergraduate	University of Toronto, Canada,	Binckiewicz	B.A.Sc	1975	Chemical Eng.
Graduate	Univ Toronto, Canada,	M. Sefton	MASc	1977	Biomaterials Eng
	Univ Toronto, Canada,	M. Sefton	PhD	1981	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)

<i>School/Company/Organization</i>	<i>Title</i>	<i>Dates</i>
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

<i>Undergraduate</i>	Env Sci & Sustainability, Introd Chem; Chem & Environment, Instrum & Control Engin (Alfaisal University)
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June 2021

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 59, number of citations: 12,823 (21 June 2021)

<https://scholar.google.com/citations?user=i-VUqA8AAAAJ&hl=en>

Scopus: h-index 45, 165 documents, 7136 citations

PAPERS:	REFEREED:	165
	CONFERENCE:	51
BOOKS:	EDITED/AUTHORED	12
	CHAPTERS	34
	REVIEWS	1
PATENTS:	ISSUED:	11
	APPLICATIONS:	7
TECHNICAL REPORTS:		5
ABSTRACTS:		43
INVITED LECTURES:		<u>50</u>
	TOTAL	379

FUNDRAISING (RESEARCH) \$30 million USD (2014-2021) 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)

ARTICLES

- Bouziane Errahmani, K., Benhabiles, O., Bellebia, S., Bengharez, Z., Goosen, M. and Mahmoudi, H., 2021. Photocatalytic Nanocomposite Polymer-TiO₂ Membranes for Pollutant Removal from Wastewater. *Catalysts*, 11(3), p.402.
- Goosen, M. and Mahmoudi, H., 2020. Sustainable Development and Future Trends in Desalination Technology. *Membrane Desalination*, pp.345-368. (book chapter)
- Abdelbaki C., Touaibia B., Ammari A., Mahmoudi H., Goosen M. (2019) Contribution of GIS and Hydraulic Modeling to the Management of Water Distribution Network. In: Koutsopoulos K., de Miguel González R., Donert K. (eds) *Geospatial Challenges in the 21st Century. Key Challenges in Geography* (EUROGEO Book Series). Springer, Cham, pp 125-150.
- Bundschuh, J., Tomaszewska, B., Ghaffour, N., Hamawand, I., Mahmoudi, H., & Goosen, M. (2018). Coupling geothermal direct heat with agriculture. In *Geothermal Water Management* (pp. 277–300). <https://doi.org/10.1201/9781315734972>
- Ahmed, R., Vourlias, G., Algoburi, A., Vogiatzis, C., Chaliampalias, D., Skolianos, S., Berger, L.M., Paul, S., Faisal, N.H., Toma, F.L. and Al-Anazi, N.M., 2018. Comparative Study of Corrosion Performance of HVOF-

Sprayed Coatings Produced Using Conventional and Suspension WC-Co Feedstock. *Journal of Thermal Spray Technology*, 27(8), pp.1579-1593.

- Mahmoudi, A., Benfekih, L.A., Yigit, A. and Goosen, M.F., 2018. An assessment of population fluctuations of citrus pest woolly whitefly *Aleurothrixus floccosus* (Maskell, 1896) (Homoptera, Aleyrodidae) and its parasitoid *Cales noacki* Howard, 1907 (Hymenoptera, Aphelinidae): A case study from Northwestern Algeria. *Acta agriculturae Slovenica*, 111, pp.407-417.
- Faisal, N.H., Ahmed, R., Prathuru, A.K., Katikaneni, S.P., Goosen, M.F.A. and Zhang, S.Y., 2018. Neutron Diffraction Residual Strain Measurements of Molybdenum Carbide-Based Solid Oxide Fuel Cell Anode Layers with Metal Oxides on Hastelloy X. *Experimental Mechanics*, 58(4), pp.585-603.
- 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 Thermal Sprayed Nanocomposite WC-Co Coatings, *Key Engineering Materials*, 735, 225-229.

An additional 130 other refereed articles

BOOKS

- Goosen, M. F. A., (ed.) 2020. "Applications of Chitin and Chitosan". Technomic Publ. Co., Inc., Lancaster, Pennsylvania. 336 pp, ISBN: 9781000111279 Edition: 1 (E-Book)
- Goosen, Mattheus FA. Insect cell culture engineering. CRC Press, 2020. (E-Book)
- Goosen, M. F. A., Lau, A. K. T. and Wu, A. F., (Eds), 2019. "Advanced Materials Research IX", Key Engineering Materials, Vol 803, pp 408. (ISBN-13: 978-3-0357-1484-5) (Proceedings of 9th International Conference on Advanced Materials Research (ICAMR 2019) January 2019 Singapore)
- 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 Chpts, 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 Chpts, 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

- Faisal, N.H., Ahmed, R., Goosen, M.F., Katikaneni, S.P. and Souentie, S., *Molten metal anode solid oxide fuel cell for transportation-related auxiliary power units*
Assignee: Alfaisal University & Saudi Arabian Oil Co, U.S. Patent 10,661,736 26 May 2020.
- Hommel, M., Sun, A. M. and Goosen, M. F. A., *Droplet Generation*.

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|---|---|----------------------|------|-----------|-------------------|
| | Assignee: | Connaught Labs. Ltd. | U.S. | 4,956,128 | 11 Sep. 1990 |
| • | Hommel, M., Sun, A. M., and Goosen, M. F. A., <i>Production of Small Droplets Including New Injectable Microcapsules Containing Living Tissue or Cells.</i> | | | | |
| | 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., <i>Microencapsulation of Living Cells and Tissue for Implantation in Body.</i> | | | | |
| | 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., <i>Multiple Membrane Biocompatible Microcapsules.</i> | | | | |
| | Assignee: | Queen's University | U.S. | 4942129 | 17 July 1990 |
| • | Goosen, M. F. A., O'Shea, G. M. and Sun, M. F., <i>Microencapsulated Tissue or Cells for Implantation.</i> | | | | |
| | Assignee: | Connaught Labs. Ltd. | U.S. | 4806355 | 21 February 1989 |
| • | Goosen, M. F. A., O'Shea, G. M. and Sun, A. M., <i>Biocompatible Microcapsules with Macromolecular Core Surrounded by Semipermeable Membrane for Prolonged Release.</i> | | | | |
| | 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., <i>Encapsulation of Living Tissue or Cells.</i> | | | | |
| | Assignee: | Connaught Labs. Ltd. | U.S. | 4689293 | 25 August 1987 |
| • | Goosen, M. F. A., and Sun, A. M., <i>Biodegradable Insulin Composition for Injection or Implantation.</i> | | | | |
| | Assignee: | Connaught Labs. Ltd. | EP | 134318 | 20 March 1985 |
| | | | CA | 1196864 | 19 November 1985 |
| • | Goosen, M. F. A., and Sun, A. M., <i>Slow Release Injectable Insulin Composition.</i> | | | | |
| | 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., <i>Microencapsulated Living Tissue and Cells</i> | | | | |
| | Assignee: | Connaught Labs. Ltd. | U.S. | 4487758 | 11 December 1984 |

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

- *Environmental Science & Sustainability* (ENV 205) (Alfaisal University 2021 ; Hybrid 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*