

0.MOTTO: "It Always Seems Impossible Until It's Done" Late Hon. Nelson ROLIHLEHLA MANDELA.



1.CONTACT DETAILS

- Staff@UNISA:1 Preller street, Muckleneuck, Pretoria 0001, Gauteng province, South Africa.
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- Email | Maazam@unisa.ac.za/Maaza@tlabs.ac.za | Tel |+27(0)218431149/45/46 |+27(0)782748584 (Cell) |

2.FAMILY STATUS

- Permanent Residence since 1996 • Married to Mrs. Veronique Grange with 3 children (Kaci-Alexander, Massinissa-Thomas, Akli-Luc),
- Algerian citizenship(Birth), • French citizenship(Marriage), •South African citizenship(Residence)

3. ACADEMIC QUALIFICATIONS

- 1991 • Ph.D in neutron wave-matter optics | Paris VI & Commissariat a l'Energie Atomique | France.
- 1988 • MSc | Paris VI | Lasers & photonics | Paris-France.
- 1987 • Diplome d'Etudes Superieure | Solid state Physics | Oran University | Oran-Algeria.
- 1986 • Honours | Solid state Physics | Oran University | Oran-Algeria.
- 1982 • Matric diploma in Mathematics | Oran Les Palmiers College | Oran-Algeria.

4. LANGUAGES & COMMUNICATION SKILLS

- Arabic: • Speaking – writing.
- French: • Speaking – writing.
- English: • Speaking – writing.
- Amazigh: • Speaking.
- Italian: • Basic.

5. RESEARCH OUTPUTS SUMMARY

- Stanford Univ.Classification Metric/Most influential worldwide scientists: Top~ 2% (2020)
- Hirsh Index H_{index} :~ 82
- I-10 Index $i_{10-index}$:~373
- Total citations: ~21068
- RG: ~49.01
- International invited talks: ~ 217 • International plenary talks ~61
- <https://scholar.google.com/citations?user=e6kaeYMAAAAJ&hl=zh-CN>
- ORCID:<https://orcid.org/0000-0002-3820-7838>
- Research Gate:https://www.researchgate.net/profile/Malik_Maaza
- Scopus ISI/Peer reviewed publications: ~ 593
- Conferences Proceeding peer reviewed publications: ~ 109 • Book chapters: ~ 04
- International invited/plenary contributions:~ 185 • International Editorial Membership:~11
- HCD (postgrads/MScs+PhDs) :~ 120 • HCD (postdocs):~22 • HCD (Junior staff):~18
- Bi-Multilateral/continental cooperation projects +completed:)47 (since 1997) • Fundraising:)MR115 (since 2005)
- Awards/International Recognitions: ~ 29

6. ACADEMIES MEMBERSHIP

- 2019 • Fellow of the National Academy of Sciences of India, NewDelhi-India,
- 2018 • Fellow of the European Academy of Sciences & Arts, Wien-Austria,
- 2015 • Fellow of the American Association for Advancement of Science(AAAS), Washington-USA,
- 2014 • Fellow of the Royal Society of Chemistry, London-UK,
- 2013 • Fellow of Islamic Academy of Sciences, Amman-Jordan,
- 2012 • Fellow of the African Academy of Sciences, Nairobi-Kenya
- 2011 • Fellow of the New York Academy of Sciences, Washington-USA
- 2018 • Ambassador, the International Foundation of Sciences(IFS), Uppsala-Sweden,
- 2017 • Member of the USA-Africa EBASI Society, Atlanta-USA,
- 2015 • Member of the Athens Institute for Education & Research (ATINER), Athens-Greece,

7. FIELDS OF EDUCATION, STI/R&D EXPERTISE

- Optics & Photonics,
- Nanosciences, nanotechnologies,
- Biogenic based advanced materials
- Nanophotonics, photo-active nanomaterials,
- Smart coatings for IR optical modulation & nanoplasmonics
- Biogenic nanoparticles & Green nanochemistry
- Neutron research reactors, Neutron, X-rays scattering and nuclear based techniques

- Biophysics, biomimics , chromogenic devices & applications,

8. EDITORIAL FUNCTION

- 2022 • Associate editor | Nature Scientific Reports | Nature-Spinger Publishing
- 2021 • Editor-In-Chief | Nano-Horizons, | Open Access J. | UNISA Publishing
- 2018-2019 • Editorial member | Scientific African, | Physical sciences Editor | Elsevier-North Holland
- 2014-2019 • Editorial member | Journal of Nanomaterials | Hindawi Publishing
- 2012-2017 • Editorial member | Advanced Nano Research (ANR) | InterTech Publishing, Seoul-South Korea
- 2017- • Editorial member | Annals of Nanoscience and Nanotechnology
- 2017- • Editorial member | Science Technology & Development Pakistan Council for Science & Technology
- 2017- • Associate editor | Science of Advanced Materials (SAM) | American Scientific Publishers,
- 2017- • Associate editor | Journal of Nanoelectronics and Optoelectronics | American Scientific Publishers,
- 2017- • Editorial Board Member | General Chemistry | American Scientific Publishers,
- 2015- • Editorial member | International Journal of Synthesis & Applications of Nanomaterials |
- 2015- • Editorial member | Journal of Nanotechnology & Advanced Material | Natural Sciences Publishing
- 2014-2016 • Advisory Board member | Royal Society J. Materials Chemistry | London-United Kingdom
- 2007- • Editorial member | Int. J. of Nanotechnology (IJNT) | Indersciences publishing, Berkeley-USA
- 2007-2012 • Editorial member | African Physical Review (APR) | Trieste-Italy,

9. ACADEMIC POSITIONS

- 2013-2028 • UNESCO-UNISA Africa Chair in Nanosciences & Nanotechnology | UNESCO | Paris-France
- 2013-2028 • Extraordinarius Professor | University of South Africa (UNISA) | Pretoria-South Africa
- 2012 • Invited professor | Nelson Mandela African University for S&T | Abuja-Nigeria.
- 2007-8 • Invited Scientist | National institute for materials science (NIMS) | Tsukuba-Japan
- 2005-2013 • Senior scientist | iThemba LABS-Western | National Research Foundation | Pretoria- South Africa
- 1997-2004 • Senior lecturer | Faculty of sciences-Univ. of the Witwatersrand | Johannesburg-South Africa
- 1996 • Postdoctoral-France | Lab. Surface & interfaces/University of Le Maine, Le Mans-France
- 1995 • Postdoctoral-France | Lab. de Couches Minces & Multicouches/Optique X, Orsay-France
- 1994 • Postdoctoral-Austria | Quantum Neutron Interferometry Gr., Atominstut Osterreichishen Univ., Vienna
- 1993 • Postdoctoral-Russia | Neutron Optics Division, Frank Laboratory, Dubna
- 1992 • Postdoctoral Germany | Neutron Optics Group, Hahn-Meitner Institute, Berlin
- 1989-91 • PhD, Quantum Neutron Optics, Commissariat a l'Energie Atomique, Saclay-France

10. AWARDS & MAJOR HONORS

- 2022 • Abdus Salam Spirit award | Trieste-Italy.
- 2021 • Association of the Commonwealth Universities award | London-UK.
- 2019 • Galileo Galilei International Commission for Optics award | Dresden-Germany.
- 2019 • Presidential Mapungubwe Silver National Order | Pretoria-South Africa.
- 2018 • World Cultural Council Jose Vasconcelos World Award of Education | Hong-Kong.
- 2018 • National Science & Technology Forum Green Innovation Award | Pretoria-South Africa.
- 2017 • African Union Continental Nkwame Nkrumah Excellence award in Science & Technology | Ethiopia
- 2015 • Chancellor Research Excellence award | South Africa
- 2013 • UNESCO-UNISA Africa chair in Nanosciences & Nanotech., France
- 2015 • Swiss Government Excellence bilateral award, Bern-Switzerland
- 2014 • National Research Foundation 10 years achievement award | South Africa
- 2013 • National Research Foundation-iThemba LABS excellence award, South Africa
- 2005 • Cambridge award, UK
- 2000 • Mellon Foundation Award, South Africa
- 1999 • Khambule Award, Johannesburg-South Africa
- 1997 • Friedel Sellschop Award | Johannesburg-South Africa
- 1998 • Honeywell Int. Prize, USA
- 1992 • Austrian Forschungsförderungsfonds der gewerblichen Wirtschaft award, Wien-Austria
- 1990 • Young Talent in Neutron Scattering, Fermi School Series CXIV, Ancona-Italy
- 1989 • Compagnie Industrielle des Lasers award, Marcoussis-France
- 2007 • Global Nanotechnology Network Award | Taipei-Taiwan
- 2012 • African Union accolade for the creation of the NANOAFNET, Ethiopia
- 2007 • National Research Foundation-iThemba LABS excellence award | South Africa
- 2016 • Extraordinary Professor at University of the Western Cape, Belleville-South Africa
- 2007 • Extraordinary Professor at University of Pretoria Tshwane university of Technology, Pretoria-South Africa
- 2013 • Extraordinary Professor | University of South Africa /Pretoria-South Africa

- 2012 • International associate scientist | NSF CREST-CNFM, Clark Atlanta University | Atlanta-USA

11. MAJOR STRATEGIC MISSIONS/ RESEARCH & TECHNOLOGY MANAGEMENT :

—International Relations Missions

- 2013- • In charge of the Africa UNESCO-UNISA Africa NanoChair | iThemba LABS-NRF, SA.
- 2010- • In charge of the Africa & international relations Office | iThemba LABS-National Research Foundation,
- 2005- • Manager & Chairman of the Nanosciences African Network (NANOAFNET), Trieste-Italy

—Board Missions

- 2016- • Board Member of the United Nations Association of South Africa/Cape Town-South Africa
- 2012- • Board Member | African Materials Research Society | Rutgers (USA)/Victoria Falls-Zimbabwe.
- 2011- • Board Member | Advisory) | African network for solar energy-ICTP/UNESCO-AIEA | Linz-Austria.
- 2010-14 • Board Member | African laser centre (ALC) | Pretoria-South Africa.
- 2010- • Board Membe | Advisory) | UNECA United Nations Economic Commission for Africa | Network of African centres for technology development & transfer | Addis Ababa-Ethiopia.

—International Jury Membership

- 2017- • Member of Evaluation Commission | Int.Foundation for Science Science | Stockholm, Sweden
- 2015- • Jury Member of the Physics Adjudication Commission | Swedish Int. Science Program | Uppsala, Sweden
- 2015- • Jury Member of the selection committee, NSTF "Photonics prize", Pretoria-South Africa
- 2014- • Jury Member of the African Academy of Science' selection committee/ Nkwame Nkruma AU prize | Addis Ababa -Ethiopia
- 2011- • Jury Member of the African Academy of Science' selection committee/ Olusegun Obasanjo prize in STI | Nairobi-Kenya.
- 2010-2017 • Jury Member | International Committee of the l'Oreal UNESCO women in sciences award | Paris-France.
- 2010-2017 • Jury Member | Sub-sahara Committee of the l'Oreal UNESCO women in sciences award | Pretoria-SA.
- 2006-10 • JuryMember | Strategic projects Assessment | Council of Scientific & Industrial Research | Pretoria-SA.
- 2004- • JuryMember | Evaluator& assessor to the National Research Foundation of South Africa | Pretoria-SA.

—Strategic Consortia Missions

- 2015- • Member of the Scientific Council | Int. Inst. for Water & Environ. Eng. 2iE | Ouga-Burkina Faso
- 2012- • Member, The Mediterranean institute for fundamental physics (MIFP) | Rome-Italy.
- 2011-13 • Member of the Management Committee | European FP7 COST action 702 | Brussels-Belgium.
- 2009-11 • Member of the South African synchrotron initiative committee (SASI) | Pretoria-South Africa.
- 2009-11 • Member of the South African Synthetic Biology National Strategy team(DST) | Pretoria-South Africa.
- 2009-12 • Member of EU-FP7 programme | Sub-sahara representative of ICPCNANONET | Brussels-Belgium.
- 2002 • Member of the National Advisory Council for Innovation-NACi-AMTS | Pretoria-South Africa

—National& continental representativity

- 2014- • National contact point: Nanosciences, South Africa-Switzerland bilateral cooperation | Bern-Switzerland
- 2010-14 • Regional Coordinator | African physical society (AfPS) | a NEPAD-AU observers | Accra-Ghana.
- 2009-12 • Africa coordinator | Member of the EU-FP7 COST action 702 | Brussels-Belgium.
- 2008-13 • Africa nodal point of the ICS-UNIDO in nanosciences/nanotechnology | Trieste-Italy.
- 2000 • National contact point of the Lasers, Atoms & Molecules Network(LAMNETWORK) | Dakar-Senegal
- 2005-9 • National contact point Nanosciences/Nanomaterials | South Africa-Japan bilateral
- 2007-11 • Africa representative | Global nanotechnology network (GNN) | Illinois-USA
- 2007-8 • Co-director of the Abdus Salam ICTP nanocollege | Trieste-Italy
- 2007-10 • Africa Council member | Africa Edward Bouchet Abdus Salam Institute (EBASI) | Accra-Ghana
- 2007-9 • Africa representative of IUPAP nanosciences working group «IUPAP-C₁₃» | Budapest-Hungary
- 2005- • Founder & Chairman of the Nanosciences African Network(NANOAFNET) | Trieste-Italy
- 2005-9 • Associate fellow of the Abdus Salam ICTP | Trieste-Italy
- 2000-1 • Co-Founding member with DST-DG of the African Laser Centre (ALC) | Pretoria-South Africa
- 2000-2 • Co-Founding member with DST-DG of the South African Nanotechnology initiative (SANi) | Pretoria-SA.
- 1999-2000 • Co-Founding member with DST-DG of the National Laser Centre of South Africa | Pretoria-SA.
- 2007-10 • Special senior advisor to the chief executive officer of the ALC | Pretoria-South Africa

12- INITIATED & SUCCESSFULLY IMPLEMENTED STEM & EDUCATION PLATFORMS

—The NANOsciences African Network(NANOAFNET)/ (<http://www.nanoafnet.tlabs.ac.za/>)

• NANOAFNET: the NANOsciences AFrican NETwork for which I am the founding chairman, is an initiative created in 2005 in Trieste-Italy under the patronage of the Abdus Salam ICTP, UNESCO, IAEA, TWAS and the ICS-UNIDO, and supported by several international agencies, is the African continent voice in the emerging field of nanosciences and nanotechnology. NANOAFNET's bipolar vision consists of enhancing the global visibility and contribution of

Africa in nanosciences while developing cost effective nanotechnologies to address urgent continental societal needs in the water, energy and health sectors. Since, it has been recognized by the AU as a network of Excellence.

—The African Laser Centre (ALC):

● As an AMCOST (African Ministerial Council on Science and Technology) flagship project, the ALC for which I was the co-initiator and founding member, was initiated in 1999 in Johannesburg and established in November 2003 by a group of African countries with an interest in laser applications, the African Laser Centre is destined to be a virtual centre that will serve as a central point for coordinating a network of excellence in laser research across the continent. The international office is located in South Africa. The Centre will provide laser researchers and industrialists throughout Africa with research and training facilities. Given the isolation of many researchers in Africa, the Centre will maintain a database of laser researchers in the region and facilitate collaboration among them. Another important role for the Centre will be to transfer technology from research laboratories to the marketplace. The Centre will support research and educational programmes in laser technology and present conferences, workshops, and topical school programmes.

—The UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology (U2ACN2)

● U2ACN2 i.e. the UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology: for which I am the holder, is an initiative created and launched in 2013 by the UNESCO and the South African Commission, the University of South Africa "UNISA" and the National Research Foundation of South Africa via one of its national facilities: iThemba LABS. Headquartered at the University of South Africa Muckleneuk main Campus in Pretoria, South Africa, the mission and vision of the U2ACN2 is to instigate and coordinate: (i) a continental dynamic in nanosciences and nanotechnology through significant capacity-building, (ii) a robust continental human capital mobility involving HEIs in Africa & partner institutions in the north, (iii) cement the several fragmented African national efforts in nano in addition of addressing urgent societal needs in the water, energy and health sectors via pragmatic nano-solutions.

—The National Laser Centre (NLC-South Africa):

● The NLC; a platform of excellence in lasers & their applications, provides a critical core of laser technology knowledge and expertise through the research, development and implementation of laser based technologies and applications in Africa and enable the South African industry to improve their global competitiveness and expand their market share. The specific NLC programme titled "Laser Rental Pool Program (LRPP) has allowed a sustainable growth of photonics & laser based educational Programmes in various High Education Institution in South Africa in general and in previously disadvantaged universities (HBUs).

13. MAJOR NORTH-SOUTH/SOUTH-SOUTH INITIATED & IMPLEMENTED AGREEMENTS

● The following strategic MoAs/MoUs were initiated & successfully implemented & managed in view of enhancing the human capital development and mobility within Africa & North-South & South-South. Since their inception, more than 300 junior and senior fellows have hosted to conduct joint research projects with sustainable S&T as well as postgraduate educational deliveries:

- 2007/Italy-Organization of Women in Science for the Developing World OWSDW-iThemba LABS/NRF
- 2007/Italy- Academy of Sciences for the Developing World (TWAS-iThemba LABS/NRF& UNISA)
- 2014/New Delhi- United Nations NonAligned Movement S&T Centre Academy of Sciences for the Developing World (UN NAM S&T- UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology.
- 2016/China-Xian University Centre for Renewable Energy (Xian Univ CRE-iThemba LABS/NRF& UNISA)
- 2015/Italy- Abdus Salam ICTP-UNISA Southern Africa affiliate Centre (ICTP & UNISA)

14. NORTH-SOUTH/SOUTH-SOUTH TRAINED POSTGRADUATES & EMERGING SCIENTISTS

● In view of preparing the workforce of tomorrow & in line with SDGs, not less than 102 postgraduates & 73 emerging scientists were mentored & trained in various fields of nanosciences under my direct supervision from various regions of Africa & the South via different platforms including North-South, South-South (BRICS, IBSA,...) frameworks.

Postgraduates: ● Africa: ~92 ● War zone or under embargo: ~10 (Libya, DRC, Yemen, Iran), ● Asia: 11 (Bangladesh, Pakistan, India, Sri-Lanka, Oman) ● Female /Male ratio ~37%.

Emerging Scientists ● Africa: ~72 ● War zone or under embargo: ~7 (Libya, DRC, Yemen, Iran), ● Asia: 10 (Bangladesh, Pakistan, India, Sri-Lanka, Oman) ● Female /Male ratio ~28%.)

15. SELECTED PUBLICATIONS

- 1•** Nano-structured Fabry-Pérot resonators in neutron optics & tunneling of neutron wave-particles
Maaza, M., Hamidi, D.
Physics Reports 2012, 514(5), pp. 177–198/ [10.1016/j.physrep.2012.01.005](https://doi.org/10.1016/j.physrep.2012.01.005)
- 2•** Thermal conductivity enhancement in gold decorated graphene nanosheets in Ethylene Glycol based nanofluid
Mbambo, M.C., Madito, M.J., Khamliche, T., ...Mothudi, B.M., Maaza, M.
Nature Scientific Reports, 2020, 10(1), 14730/ [10.1038/s41598-020-71740-1](https://doi.org/10.1038/s41598-020-71740-1)
- 3•** Photodegradation of organic pollutants RhB dye using UV simulated sunlight on CeO₂ based TiO₂ nanomaterials for antibacterial applications
MM K Kasinathan, J Kennedy, M Elayaperumal, M Henini, M. Maaza
Nature Scientific reports 6, 38064 (2016)/[10.1038/srep38064](https://doi.org/10.1038/srep38064)
- 4•** First principle simulation of coated hydroxychloroquine on Ag, Au and Pt nanoparticles
Morad, R., Akbari, M., Rezaee, P., ...Maaza, M., Jamshidi, Z.
Nature Scientific Reports, 2021, 11(1), 2131/[10.1038/s41598-021-81617-6](https://doi.org/10.1038/s41598-021-81617-6)
- 5•** Title: CdO/CdCO₃ nanocomposite physical properties & cytotoxicity against selected breast cancer cell lines
Lefojane, R.P., Sone, B.T., Matinise, N., ...Maaza, M., Sekhoacha, M.P.
Nature Scientific Reports, 2021, 11(1), 30/[10.1038/s41598-020-78720-5](https://doi.org/10.1038/s41598-020-78720-5)
- 6•** Isolation and characterization of chitosan from Ugandan edible mushrooms, Nile perch scales and banana weevils for biomedical applications
Ssekatawa, K., Byarugaba, D.K., Wampande, E.M., ...Ejobi, F., Kirabira, J.B.
Nature Scientific Reports, 2021, 11(1), 4116/[10.1038/s41598-021-81880-7](https://doi.org/10.1038/s41598-021-81880-7)
- 7•** Thermal conductivity enhancement in gold decorated graphene nanosheets in ethylene glycol based nanofluid
M. C . Mbambo, M. J. Madito, T. Khamliche, C. B. Mtshali, Z. M. Khumalo, I. G. Madiba, B. M. Mothudi & M. Maaza,
Nature scientific Reports, (2020) 10:14730/[10.1038/s41598-020-71740-1](https://doi.org/10.1038/s41598-020-71740-1)
- 7•** From Himba indigenous knowledge to engineered Fe₂O₃ UV-blocking green nanocosmetics
D. Havenga, R. Akoba, L. Menzi, S. Azizi, J. Sackey, N. Swanepoel, A. Gibaud & M. Maaza
Nature scientific Reports, (2022) [10:14730/ doi.org/10.1038/s41598-021-04663-0](https://doi.org/10.14730/doi.org/10.1038/s41598-021-04663-0)
- 8•** Anderson localization of IR light in 1D nanosystems
M. Maaza, C. N. R. Rao
Journal of the Optical Society of America A, Vol. 37, No. 11(2020) [10.1364/JOSAA.394917](https://doi.org/10.1364/JOSAA.394917)
- 9•** Phase transition in a single VO₂ nano-crystal: Femtosecond tunable optoelectronic nano-gating
Maaza, M., Simo, A., Itani, B.M., ...Doyle, T.B., Luk'Yanchuk, I.
Journal of Nanoparticle Research, 2014, 16(5), 2397/ [10.1007/s11051-014-2397-z](https://doi.org/10.1007/s11051-014-2397-z)
- 10•** Submicronic VO₂-PVP composites coatings for smart windows applications and solar heat management
Madida, I.G., Simo, A., Sone, B., ...Thema, F.T., Maaza, M.
Solar Energy, 2014, 107, pp. 758–769/[10.1016/j.solener.2014.06.025](https://doi.org/10.1016/j.solener.2014.06.025)
- 11•** VO₂ nanostructures based chemiresistors for low power energy consumption hydrogen gas sensing
Simo, A., Mwakikunga, B., Sone, B.T., Madio, R., Maaza, M.
International J. Hydrogen Energy, 39(15), pp. 8147–8157(2014)/ [10.1016/j.ijhydene.2014.03.037](https://doi.org/10.1016/j.ijhydene.2014.03.037)
- 12•** Industrial textile effluent treatment and antibacterial effectiveness of Zea mays L. Dry husk mediated bio-synthesized copper oxide nanoparticles
Nwanya, A.C., Razanamahandry, L.C., Bashir, A.K.H., Iwuoha, E.I., Maaza, M.
Journal of Hazardous Materials, 2019, 375, pp. 281–289/[10.1016/j.jhazmat.2019.05.004](https://doi.org/10.1016/j.jhazmat.2019.05.004)
- 13•** Thermal induced tunability of surface plasmon resonance in Au-VO₂ nanophotonics
Maaza, M., Nemraoui, O., Sella, C., Beye, A.C., Baruch-Barak, B.
Optics Communications, 2005, 254(1-3), pp.188–195/[10.1016/j.optcom.2004.08.056](https://doi.org/10.1016/j.optcom.2004.08.056)
- 14•** From Himba indigenous knowledge to engineered Fe₂O₃ UV-blocking green nanocosmetics.
Havenga, D., Akoba, R., Menzi, L. et al.
Nature scientific Reports, (2022) <https://doi.org/10.1038/s41598-021-04663-0>

15• From From Khoi-San Indigenous Knowledge to Bioengineered CeO₂ Nanocrystals to exceptional UV- Blocking Green Nanocosmetics,

N. Ditlopo, M. Maaza et al,

Nature scientific Reports, (2022) <https://doi.org/10.1038/s41598-021-04663-0>

16• Mercury goes Solid at room temperature at nanoscale & a potential Hg waste storage,

N. Kana, M. Maaza et al,

Nature scientific Reports, (2022) <https://doi.org/10.1038/s41598-021-04663-0>

17• On the remarkable nonlinear optical properties of natural tomato

N. Numan, M. Maaza et al,

Nature scientific Reports, (2022) <https://doi.org/10.1038/s41598-022-12196-3> (2022)

18• A novel approach for engineering efficient nanofluids by radiolysis.

Maaza, M., Khamliche, T., Akbari, M. et al.

Nature scientific Reports, Sci Rep 12, 10767 (2022). <https://doi.org/10.1038/s41598-022-14540-z>

FULL LIST OF PUBLICATIONS ARE REPORTED IN ANNEXURE-2

<https://scholar.google.com/citations?user=e6kaeYMAAAAJ&hl=zh-CN>

<https://www.scopus.com/results/authorNamesList.uri?st1=Maaza&st2=M&origin=searchauthorlookup>