# 5.1 Peer-Reviewed Publications

**2000**

1. **Taele, B.M**., Lawson, N.S. and Wigmore, J.K., “*Photo-Enhanced Response of Hopping Bolometer for Detection of Particles and Non-equilibrium Phonons*”, **Nuclear Instruments & Methods in Physics Research**, **A 444**, pp. 46 (2000).
2. **Taele, B.M**., Lawson, N.S. and Wigmore, J.K., *“Low-Temperature GaSb Bolometer for Non-Equilibrium Phonon Pulse detection*”, **Journal of Physics D 33**, L125 (2000).

**2001**

1. **Taele, B.M**., Kozorezov, A.G, Hamid bin Rani and Wigmore, J.K., “*Point Defects Scattering of THz Phonons in Sapphire Determined by Heat Pulse Back-Scattering*”, **Radiation Effects & Defects in Solids,** Vol. 155, pp. 339 (2001).

**2002**

1. Wigmore, J.K., Kozorezov, A.G., Rani, H.b., Giltrow, M., Kraus, H., **Taele, B.M**., “*Scattering of THz Phonons*” **Physica B: Condensed Matter**, Vol. 316-317 (C) pp. 589 (2002).

**2003**

### Mukaro, R., Gasseller, M., Kufazvinei, C., Olumekor, L. and **Taele, B.M**. “*Microcontroller-based multi-sensor apparatus for temperature control and thermal conductivity measurement*”, **Measurements Science & Technology**, Vol. 14, N45 (2003).

**2004**

# Taele, B.M. and Mukaro, R., “*A study of the bolometric capabilities of p-type InSb and GaSb for phonon pulse experiments*” physica status solidi (c) Vol.1, No. 1, 96 (2004).

**2005**

### Mukaro. R, **Taele, B.M**. and Tinarwo, D**,** “*In-situ measurement of the energy gap of germanium using a microcontroller-based system"*, **European Journal of Physics**, Vol. 27, No. 3, 531 (2006)**.**

1. **Taele, B.M**, L. Mokhut’soane and K.K. Gopinathan, “*The Potential of Renewable Energy Technologies for Rural Development in Lesotho*”; **Renewable Energy**, Vol. 32, No. 4, 609 (2006).

**2007**

1. Proskuryakov, Y.Y., Durose, K, **Taele, B. M**., Welch, G.P. and Oelting, S., “*Admittance Spectroscopy of CdS/CdTe Solar Cells Subjected to Varied Nitric-Phosphoric Etching Conditions*”, **Journal of Applied Physics,** Vol. 101, Issue 1, 014505 (2007).
2. Proskuryakov, Y.Y., Durose, K, **Taele, B. M**., Welch, G.P. and Oelting, S., “*Impedance Spectroscopy of Unetched CdTe/CdS Solar Cells – Equivalent Circuit Analysis*”, **Journal of Applied Physics**, Vol. 102, Issue 2, 024504 (2007).

**2008**

1. **Taele, B.M**, Narayan, H. and Mukaro, R. “*Hopping photoconductivity of Zn-doped GaAs bolometer and phonon detection”*, **Solid-State Electronics,** Vol. 52, Issue 5, 782 (2008)**.**

**2011**

1. Makhamisa Senekane, Sehlabaka Qhobosheane, **B.M. Taele**, “*Elliptic Curve Diffie-Helmann Protocol Implementation Using Picoblaze*”, ***International Journal of Computer Science and Network Security****,* Vol. 11, No. 6 pp. 30-34 (2011)

**2012**

1. **B.M. Taele**, L. Mokhutšoane, I. Hapazari, S.B. Tlaliand M. Senatla, “*Grid electrification challenges, photovoltaic electrification progress and energy sustainability in Lesotho”,* **Renewable and Sustainable Energy Reviews,** Vol. 16, Issue 1, pp. 973-980 (2012)
2. **B.M. Taele**, L. Mokhutšoane and I. Hapazari “An overview of s*mall hydropower development in Lesotho: challenges and prospects*”, **Renewable Energy Vol. 44,** pp. **448- 452 (2012)**
3. Motlatsi Molati and **B.M. Taele**, “*Lie symmetry classification of the time-variable coefficient nonlinear wave equation in semiconductors*”, **International Journal of Nonlinear Science Vol.14 No.3,** pp. **379-384 (2012)**

**2015**

1. I. Hapazari, V. Ntuli and **B.M. Taele**, “*Waste Generation and Management in Lesotho and Waste to Clay Brick Recycling: A Review*”, British Journal of Applied Science & Technology,8(2): 148 – 161, 2015: *ISSN: 2231-0843*

**2016**

## Matthew Orosz, Paul Mathaha, Anadola Tsiu, B.M. Taele, Lengeta Mabea, Marcel Ntee, Makoanyane Khakanyo, Tamer Teker, Jordan Stephens and Amy Mueller, “*Low-Cost Small Scale Parabolic Trough Collector Design for Manufacturing and Deployment in Africa”*, AIP Conference Proceedings, 1734, 020016 (2016); doi: 10.1063/1.4949040

1. Senekane, M. and **Taele, B.M.** (2016) “*Prediction of Solar Irradiation Using Quantum Support Vector Machine Learning Algorithm*”. **Smart Grid and Renewable Energy**, 7, 293-301. <http://dx.doi.org/10.4236/sgre.2016.712022>

**2017**

1. A.J. Tsiu, L.Z. Thamae, I. Hapazari and **B.M. Taele**, “***Construction and Performance Evaluation of a Low-cost Flat-plate Solar Energy Collector*”**, ***Modern Environmental Science and Engineering,*** (ISSN 2333-2581), **January 2017, Volume 3, No. 1, pp. 61-66; Doi: 10.15341/mese(2333-2581)/01.03.2017/008**
2. Makhamisa Senekane; Mhlambululi Mafu; **Benedict Molibeli Taele**, “***Privacy-preserving quantum machine learning using differential privacy***”, ***IEEE AFRICON 2017 Proceedings***, **pp. 1432-1435, ISSN: 978-1-5386-2775-4/17; DOI: 10.1109/AFRCON.2017.8095692**

**2018**

1. M. Senatla, Mamello Nchake, **Benedict M. Taele**, I. Hapazari, “***Electricity capacity expansion options for Lesotho - implications on energy policy***”, Energy Policy (2018)