



MOHD MUSTAFA AWANG KECHIK

My research focuses on High Temperature Superconductor (HTS) materials through our research grants and through our collaborations with other universities, international laboratories and industries. My work mainly focuses on flux pinning properties in High HTS films and bulks. I am also a member of Institute of Physics, London, and Fellow of Malaysian Solid State Science and Technology Society (FMASS).

RESEARCH PROFILE

Current Position : Associate Professor
Expert : Superconductor
H-Index : 11 (Scopus) 13 (GS)
Total Citation : 362(Scopus)500(GS)
updated 080622

CONTACT



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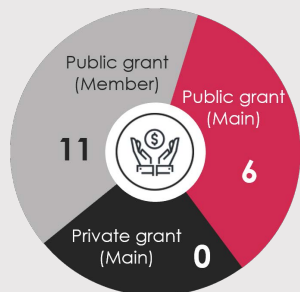
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RESEARCH INPUT

17 Research Grant **RM 1.52 M**



Total Funding as Project Leader RM 460K

RESEARCH OUTPUT

95 Articles in journal, 31 Senior Author
2 Chapters in Book

EDUCATION

Post Doctoral

University of Birmingham, UK

PhD (Superconductor)

University of Birmingham, UK

Master of Science (Superconductor)

The National University of Malaysia

Bachelor of Science (Hons.) in Physics

Universiti Putra Malaysia

ACHIEVEMENT & AWARDS

ERASMUS+KA17 EU International Credit Mobility Award 2022

University of Minho, Portugal

Excellent Service Award 2022

Universiti Putra Malaysia

Sakura Science Program, JST MEXX Japan 2020

Nagoya Institute of Technology, Japan

Gold Medal at International Putra InnoCreative Teaching & Learning PICTL 2020

Students' Soft Skills and Knowledge Development Through Academic Mobility

Gold Medal at Materials Technology Challenges (MTC 2020)

The invention of The Effect of Graphene Nano Particle Addition on Bi-2223 Superconducting Properties Prepared via Co-Precipitation Method

Best InnoCreative Educator Award at International Putra InnoCreative Teaching & Learning PICTL 2019

Physics 5.0: Connecting The Dots Moulding Towards Functional Physics Graduates

Excellent Service Award 2017

Universiti Putra Malaysia

Postdoctoral Research Fellow 2014-2016

School of Electrical, Electronic & System Engineering, University of Birmingham, UK

Silver Medal at International Invention Innovation Industrial Design ITEX 2006

The Invention of Improvement Critical Current Density of BSCCO 2223 Tape

REVIEWER/EDITOR

2016 Putrajaya International Built Environment, Technology and Engineering Conference

2016 Applied Superconductivity Conference, USA

2016 The 5th International Conference on Solid State Science and Technology (ICSSST 2015)

2018 Book of Physics, UPM Press

2018, 2022 ASM Science Journal

2019 International Journal of Nanoelectronics & Materials

2019 Journal of Physics and Chemistry of Solids

2020, Sains Malaysiana Journal

2020 Journal of Molecular Physics

2021 IEEE Transactions on Applied Superconductivity

2021 Ceramic International Journal

2022 Materials

2022 Applied Sciences

TEACHING EXPERIENCE

PHY3302 Digital Electronics
PHY3105 Modern Physics
PHY3103 Physics I
PHY2001 General Physics
PHY4206 Metal and Alloy
PHY4205 Ceramics and Polymer
PHY4402 Modern Optics
PHY4203 Material Science
PHY3304 Principle of Measurement System
PHY3104 Physics II
PHY4204 Analytical Methods of Structure & Microstructure
PHY4208 Superconductor
FCE3204 Thinking Skills
PHY4903 Industrial Training
PHY5203 Physics of Thin Films

CONFERENCES/SEMINAR (PRESENTED PAPERS/POSTERS)

M. M. Awang Kechik, P. Mikheenko, J.S. Abell, I. A. Crisan, H. Baqiah, S.K. Chen, K.P. Lim and A. H. Shaari. Flux Pinning Mechanisms of YBCO thick films by BZO nano inclusion. World Congress on Applied Nanotechnology 24-26 Nov. 21 Erzurum, Turkey.

M. M. Awang Kechik, S.A. Halim, S. K Chen and K. P. Lim. Increased critical current density and pinning force in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thick films by BaZrO_3 nano inclusions. The International Conference Science Physics and Education 2021, 10-11 Sep. 2021 Lombok, Indonesia.

M. M. Awang Kechik, S.A. Halim, S. K Chen and K. P. Lim. Increased Critical Current Density and Pinning Force in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films by Nano Inclusions. International Symposium on Superconducting, Magnetic and Energy Materials (ISSM 2020) 6-7 Oct. 2020 Tokyo, Japan

M. M. Awang Kechik, P. Mikheenko, J.S. Abell, I. A. Crisan, H. Baqiah, S.K. Chen, K.P. Lim and A. H. Shaari. Optimization of superconducting properties of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films grown by pulsed laser deposition. 4th Padjadjaran International Physics Symposium 13-14 Nov 2019 Bandung, Indonesia.

M.M. Awang Kechik, S.A. Halim, S. K Chen and K. P. Lim. Application of Superconductor on Empowering Agriculture 4.0. Seminar on Agriculture and Green Technology, AgTech2019, 5th April 2019, Bandung, Indonesia.

N.A. Che Dzul-Kifli, M. M. Awang Kechik, S.A. Halim, S. K. Chen and K. P. Lim. Fabrication and Characterization of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Superconductor by Thermal Treatment Method with Addition of BiFeO_3 nanoparticle. Proceeding of International Fundamental Science Congress on 23 – 24 Oct 2018, RHR Hotel @ UNITEN, Kajang, Selangor.

M.M. Awang Kechik, P. Mikheenko, D. Cardwell, N.H. Babu, J.S. Abell, I.A. Crisan 2013. Increased critical current density and pinning force in YBCO thin films by Gd_{2411} nano inclusions. Proceeding of International Conference on Nanoscale 2013, Sep. 2013, Istanbul, Turkey

P. Mikheenko, V-S Dang, M.M. Awang Kechik, J. S. Abell and A. Crisan. Magnetic field-controlled anisotropy of critical current in nano-engineered $\text{YBa}_2\text{Cu}_3\text{O}_x$ films. Applied Superconductivity Conference 2010.

M.M. Awang Kechik, P. Mikheenko, A. Sarkar, V. S. Dang, N. Hari Babu, D. A. Cardwell, J. S. Abell and A. Crisan. Increased pinning force in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films by $\text{Gd}_2\text{Ba}_4\text{CuWO}_7$ nano inclusions. 9th European Conference on Applied Superconductivity 2009, Dresden, Germany

M. M. Awang Kechik, P. Mikheenko, N. Hari Babu, D. A. Cardwell, P. Paturi, H. Huhtinen, J.S. Abell and A. Crisan. Artificial pinning centres in superconducting films induced by secondary phase nano-inclusions. European Summer School on Superconductivity, Grenoble, France 2009.

M. M. Awang Kechik, P. Mikheenko, N. Hari Babu, D. A. Cardwell, J.S. Abell & A. Crisan, Artificial Pinning Centres in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films by $\text{Gd}_2\text{Ba}_4\text{CuWO}_7$ Nano-Inclusions. International Conference on Superconductivity and Magnetism 2008, Ankara, Turkey (IOP,UK)

M. M. Awang Kechik, P. Mikheenko, N. Hari Babu, D. A. Cardwell, J.S. Abell & A. Crisan. Improvement of critical current density in $\text{YBa}_2\text{Cu}_3\text{O}_x$ films deposited from a melt-grown target. Condensed Matter Material Physics 2008, Royal Holloway, London (IOP,UK)

CONSULTANCY PROJECT

- 2018-present: Head of UPM-Anton Paar Interim Lab
- 2012-2013: British Aerospace Engineering Outreach Program