

Photonics & Materials Research Group

Fakulti Sains Gunaan
M. Kamil Abd-Rahman

TIER 5 – RESEARCH INITIATIVE GROUP (RIG)

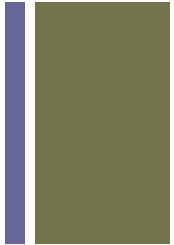
Name of RIG	:	PHOTONICS AND MATERIALS RESEARCH GROUP (Photonics PAMRG)
Tier	:	5
Leader	:	Prof. Dr. Mohd Kamil Abd Rahman
CoRe	:	Frontier Materials and Industrial Application (FMIA)
Registered Faculty	:	Faculty of Applied Sciences
Registration date (Senate Approval)	:	1 Jun 2016 (Lantikan semula)
UiTM Niche Area	:	Photonics
RIG Niche Area	:	Optical Materials, Optical Fiber, Sensors, Optical Amplifiers, LASERS, Nanofibers/Thin Films, Theoretical Simulations, Optical Waveguides

BACKGROUND OF MEMBERS

BIL	NAMA	KELAYAKAN AKADEMIK	FAKULTI	BIDANG KEPAKARAN
1	PROF DR MOHD KAMIL ABD RAHMAN	PhD	Sains Gunaan	Lasers, Fiber Amplifier, Optical Sensor & Optical Materials
2	PROF MADYA DR MOHD HANAPIAH MOHD YUSOFF	PhD	Sains Gunaan	Microwave and optical waveguides and devices; Passive photonic planar devices; Photonic crystals
3	DR ABDEL BASET M.A. IBRAHIM	PhD	Sains Gunaan	Nonlinear/Quantum Optics Modeling
4	DR. IKHWAN NAIM MD NAWI	PhD	Asasi Sains, Dengkil	Laser, nonlinear optics, laser applications (fiber coupler, micro-resonator)
5	DR. RAMZYKAN RAMLY	PhD	Kejuruteraan Mekanikal	Optical sensors in Aircraft Structures
6	SITI NAFISAH MD RASHID	MSc	Asasi Sains, Dengkil	Laser and Optical Materials



+ Track Record (5 years)



No	Name	Indexed Pub.	Citation	Impact Factor	Grant	No. of PG
1.	Mohd Kamil Abd Rahman (Leader)	25	540	0.529 → 4.078	CREST, E-Science, FRGS, RAGS, DANA, BESTARI	10
2.	Mohd Hanapiah Mohd Yusoff	7	15	1.33	EScience	5
3.	Abdel-Baset M.A. Ibrahim	18	103	0.415 → 2.766	FRGS	5
4.	Ikhwan Naim bin Md. Nawi	7	289	2.24	RAGS, 2xLESTARI	1
5.	Ramzyzan Ramly (Mech. Eng.)	4	44	0.502	FRGS	1
6.	Siti Nafisah Md Rashid	2	5		RAGS	1

ACHIEVEMENT(2014-2017)

PENCAPAIAN	2014	2015	2016	2017
Master Degree – Enrolled/On-going	12	14	10	10
Master Degree - Graduated	1	1	3	3
PhD – Enrolled/On-Going	6	6	10	13
PhD – Graduated	1	3	3	2
No. of research grants	9	4	3	4
Total value of research grants (RM)	319,000.00	581,443.45	536,443.45	396,443.45
Total publication (Indexed Journals)	5	9	5	7
IPR (Patent)	0	1		

OTHER ACHIEVEMENT (2014-2017)

ACHIEVEMENT	2014	2015	2016	2017
COLLABORATION (National & International)	5	7	7	12
MEMBERSHIP OF PROFESSIONAL BODIES AND ASSOCIATIONS (National & International)	5	5	5	5
NO. OF SPECIAL INVITATION/ APPOINTMENT/ EXPERTISE (National & International) incl. Keynote Speaker, Invited speaker, Thesis examiner, Judge, Reviewer, Panel, etc.)	20	21	22	21
NO. OF AWARDS/ RECOGNITION AND APPRECIATION (National & International)	1	1		1

Niche Area and Relevance of RIG



■ Significance of Photonics Research

- **Photonics** found in many disciplines: [Physics](#), [Engineering](#), [ICT](#), [Mathematics](#), [Chemistry](#), [Bio-medicine](#), [Material Science](#) ... etc

- Some applications of photonics:



Medical surgery, diagnostic, therapy	Display technology
Optical computing, Aerospace	Military, Defence & Security
Telecommunications	Spectroscopy and Measuring Equipment
Industrial manufacturing	Consumer equipment, entertainment



➔ Photonics Research can be found in most Universities around the globe.

■ Local competitor

- **Research Partners** / competitor
- Collaborative Research

Our Collaborators



Research highlights



- Advance Optical Point-of-Care System
 - Lab-on-Fiber (Multi-function sensing)
 - Chemical Sensing and Pattern/Colour Recognition
 - Optical device with wireless Remote Monitoring (IoT)



OSA Foundation
Siegman International School on Lasers
Co-founded by IIG Photonics
3-8 AUGUST 2014
STANFORD UNIVERSITY
Stanford, California, USA
Quality Education. Valuable Interactions.

Exploring New Horizon in Optics
17-21 July 2017
Phan Thiết, Vietnam

25-29 SEPT iindex 2017
DEWAN AGUNG TUANKU CANSOLOR (DATC)
Universiti Teknologi MARA
Shah Alam, MALAYSIA
"Innovate to Inspire"

RIBU
Research Innovation Business Unit
YBhg. Professor Dr. Mohd Kamil Abd. Rahman
Fakulti Sains Gunung
UTM Skudai
500-RIBU (IP 502319T)
1 Ape 2016

Siam Photon
4th ASEAN Synchrotron Science Cam
10-14 November 2015
Synchrotron Light Research Institute
(Public Organization), Nakhon
Ratchasima, Thailand



INTERNATIONAL YEAR OF LIGHT 2015 @ KLESF
9:00 AM - 5:00 PM
FRIDAY - SUNDAY
30 OCT - 1 NOV 2015
Mines International Exhibition & Convention Centre (MIECC)

PATENT
MARDIAN HAYATI ABU BAKAR
Ketua UTM Perguruan Tinggi Islamik
Islamabad

+ Research Roadmap (→ 2025)

<http://photonic.uitm.edu.my/>

Issues

Critical path from science to market

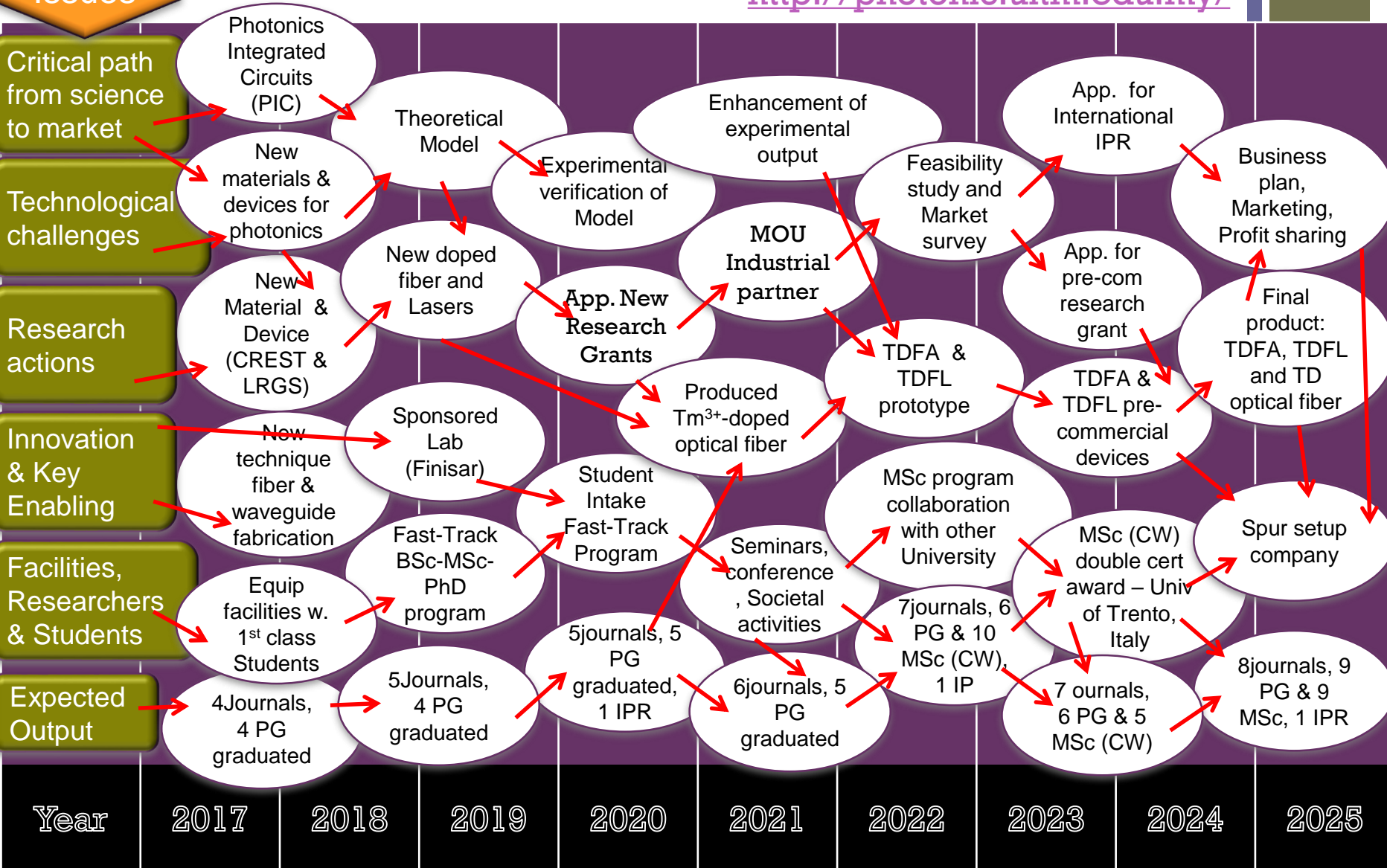
Technological challenges

Research actions

Innovation & Key Enabling

Facilities, Researchers & Students

Expected Output



Year 2017 2018 2019 2020 2021 2022 2023 2024 2025