From Research & Innovation Ideas into Product Patent

Muhammad Hussain Ismail
School of Mechanical Engineering, College of Engineering

Universiti Teknologi MARA, Shah Alam

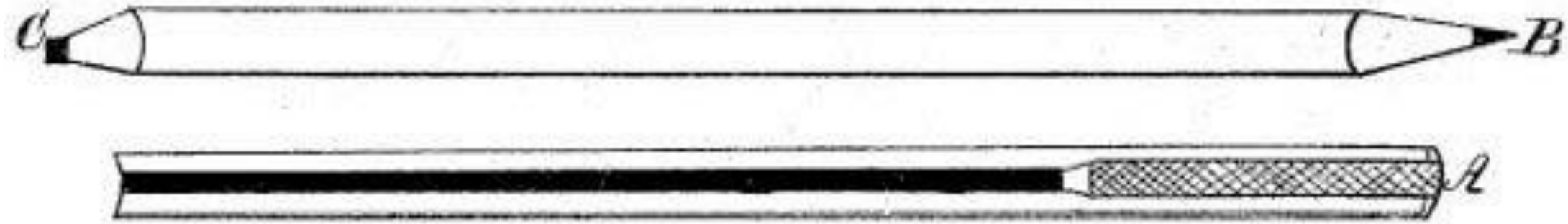
Outline

- Motivation
- Technology Readiness Level
- Innovation of Dental Implant
- What's next?
- Final Remarks

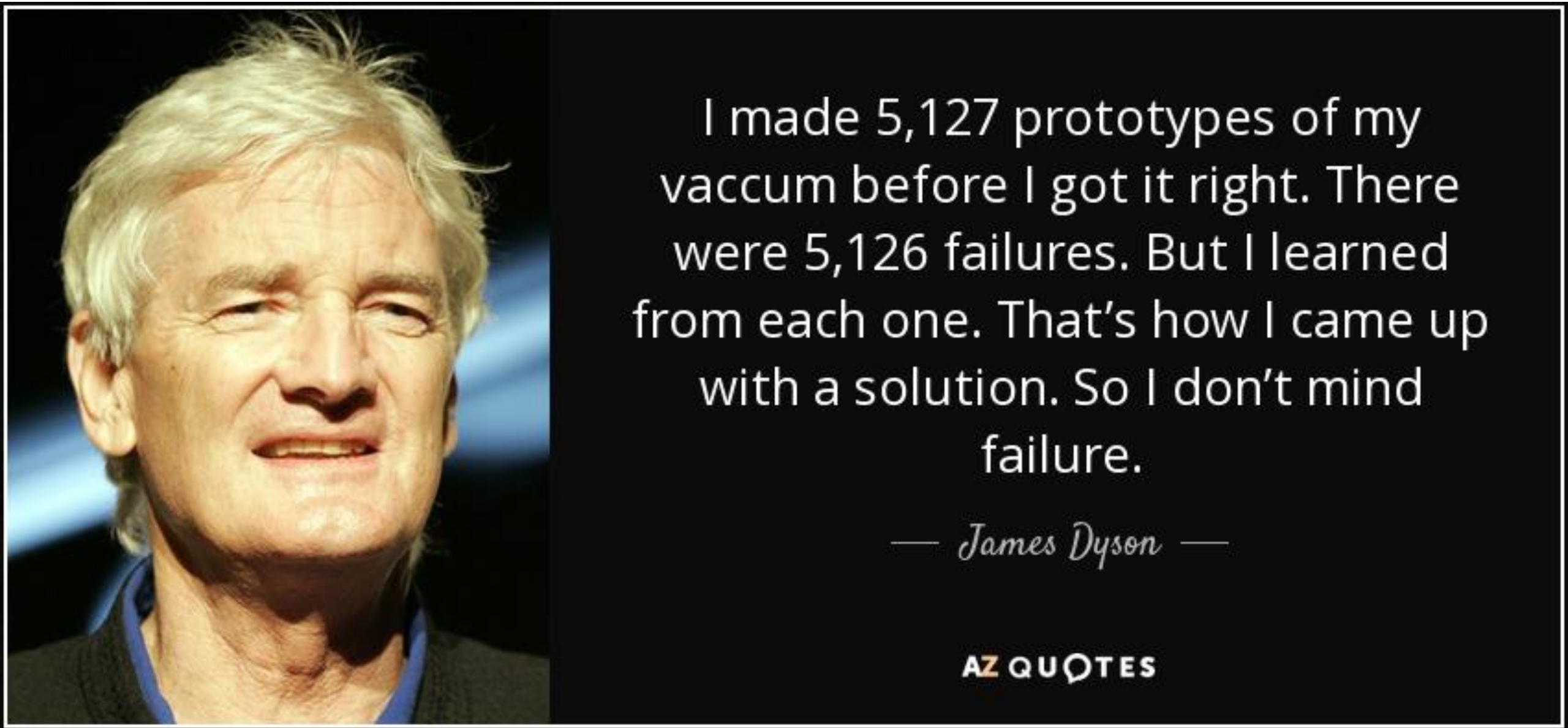
H. L. Lijman.

Pencil & Eraser.

No. 19,783. Patented Mar. 30, 1858.



Inspiration



UNIVERSITI TEKNOLOGI MARA

UNIVERSITI TEKNOLOGI MARA | THE JAMES DYSON AWARD 2023 | innovationlabs.my ideate.create.collaborate! | office of industry, community & alumni network.

+ICAN

LEARN **MORE** ABOUT THE **JAMES DYSON AWARD**

Opening Remarks by
Prof. Dr. Mohamad Hariri Abdullah
Deputy Vice Chancellor
Industry, Community and Alumni Network
(+ICAN) UiTM

Speakers

Manyi Ho
James Dyson Foundation
Project Manager

Dr Helmi Rashid
School of Mechanical Engineering
College of Engineering
1st Runner up, JDA 2022

7 April 2023

3:00 p.m. - 4:30 p.m.

Dewan Kuliah C
College *of* **Engineering,** UiTM

THE JAMES DYSON FOUNDATION
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In collaboration with
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THE JAMES DYSON AWARD 2023

KEY DATES 2023

MAR 01	JUL 19	SEP 13	OCT 18	NOV 15
Entries open	Entries close	National winners and finalists announced	Dyson engineers' shortlist	International winner and sustainability winner announced

UiTM di hatiku

Why IP protection is given?

- ✓ Capital expenditure for new products
- ✓ R&D
- ✓ Marketing and advertisement
- ✓ No free loaders
- ✓ Maintaining loyal followers
- ✓ Profit

Top 50 countries for patent applications 2021

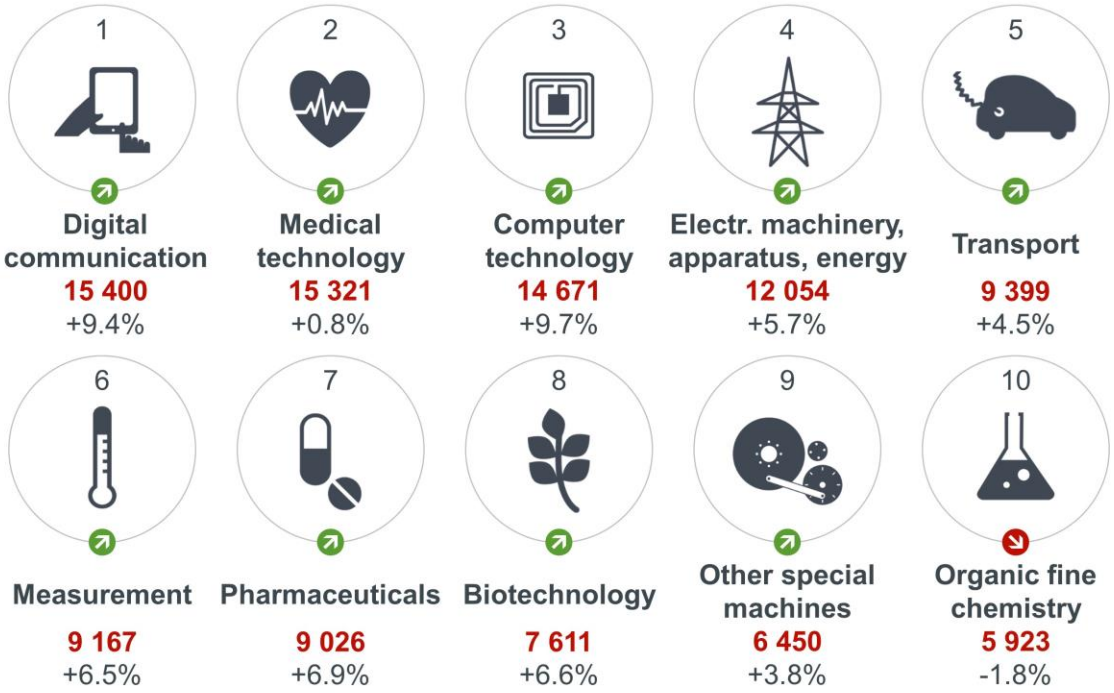
TOP 50

		2021	Change
1	United States	46 533	+5.2%
2	Germany	25 969	+0.3%
3	Japan	21 681	-1.2%
4	P.R. China	16 665	+24.0%
5	France	10 537	-0.7%
6	R. Korea	9 394	+3.4%
7	Switzerland	8 442	+3.9%
8	Netherlands	6 581	+3.1%
9	United Kingdom	5 627	-1.2%
10	Sweden	4 954	+12.0%
11	Italy	4 919	+6.5%
12	Denmark	2 642	+9.2%
13	Belgium	2 485	+3.3%
14	Austria	2 317	+0.5%
15	Finland	2 111	+11.2%
16	Canada	2 083	+18.4%
17	Spain	1 954	+8.9%
18	Israel	1 717	+2.0%
19	Chinese Taipei	1 472	+7.7%
20	Australia	1 019	+5.5%
21	Ireland	956	-2.4%
22	India	817	+16.5%
23	Turkey	732	+21.0%
24	Singapore	711	+17.1%
25	Norway	640	-1.8%
26	Poland	539	+12.8%
27	Liechtenstein	494	+12.5%
28	Luxembourg	430	+7.0%
29	Saudi Arabia	377	-23.7%
30	Cayman Islands	295	-34.9%
31	Barbados	293	+13.6%
32	Portugal	286	+13.9%
33	Russian Federation	272	+1.1%
34	New Zealand	226	+15.3%
35	Czech Republic	203	-1.5%
36	Greece	198	+46.7%
37	Brazil	181	+13.1%
38	Hong Kong SAR (China)	180	+18.4%
39	Hungary	118	+8.3%
40	Slovenia	116	-29.7%
41	Thailand	98	+53.1%
42	South Africa	86	-5.5%
43	Puerto Rico	78	-75.2%
44	Lithuania	73	+46.0%
45	Antigua and Barbuda	71	-27.6%
46	Estonia	69	+21.1%
47	United Arab Emirates	65	-9.7%
48	Iceland	62	+51.2%
48	Mexico	62	+19.2%
50	Malta	51	-19.0%

European Patent Office 2022

Technical fields with most patent applications 2021

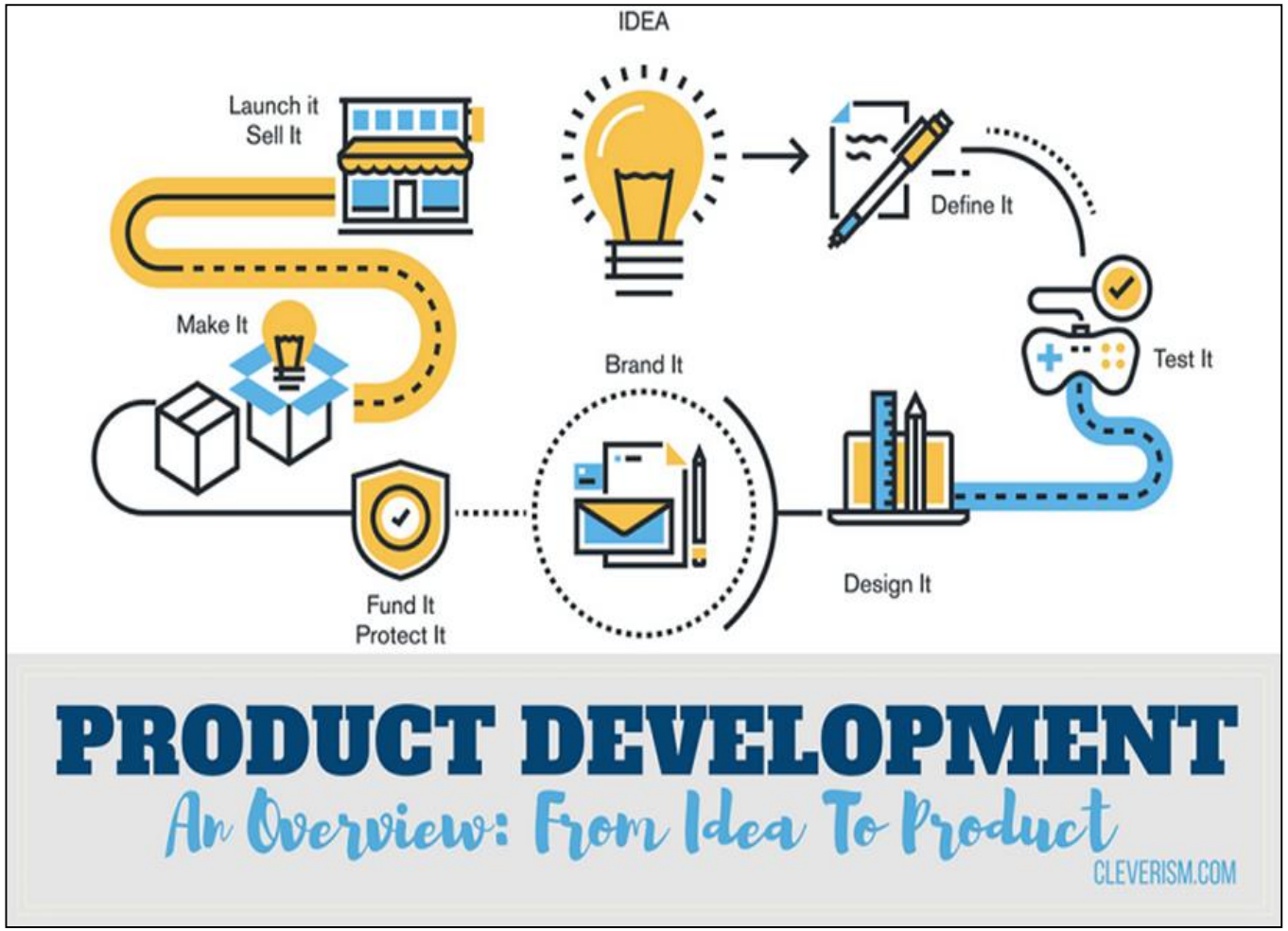
TOP 10



European Patent Office 2022

https://www.epo.org/newsevents/news/2022/20220405.html

ECOSYSTEM OF INNOVATION ...



It is the **symbiosis** between '**creative organisations**' and '**creative people**' that produces innovation.

It is the interplay between individual creativity and environmental creativity

driving force of innovation in any organisation

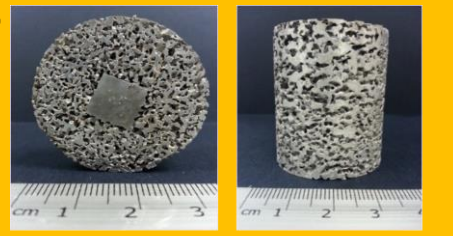
(Tidd, Bessant and Pavitt, Managing Innovation)

A method of producing Aluminium Foam with Central Pillar

Application number : PI 20147074013

Grant number : MY-172594-A

Date of Grant : 14 December 2019



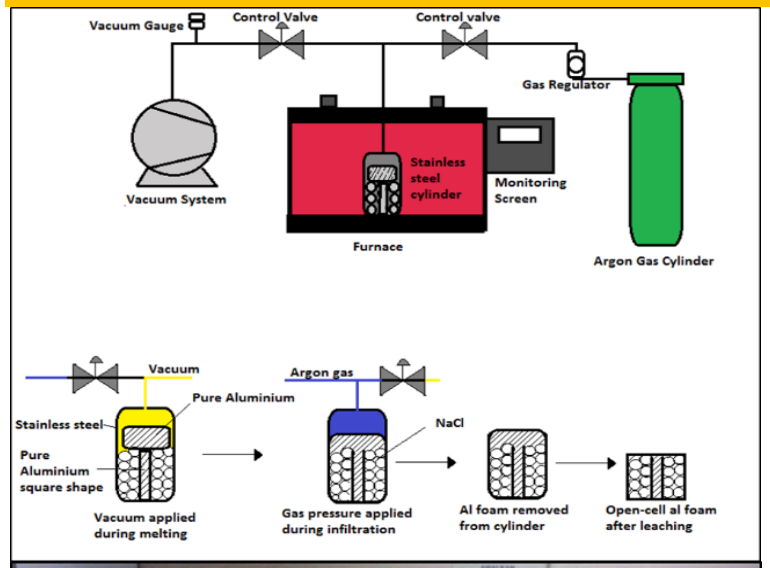
Aluminium foam with central pillar: (a) Top view (a) Side view

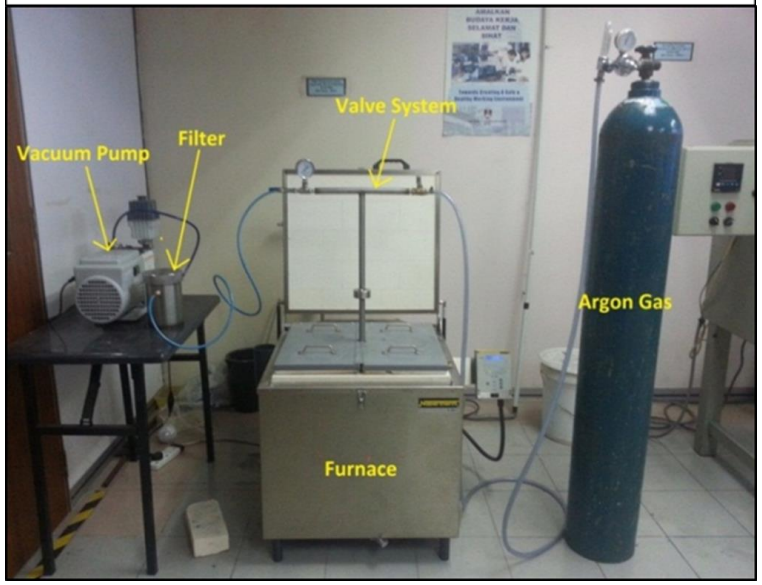
GOLD AWARD

SILVER AWARD

IIDEX 2013

MTE 2014





PERBADANAN HARTA INTELEK MALAYSIA
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59000 KUALA LUMPUR
MALAYSIA

Tel : +603 – 2299 8400
Faks(Fax) : +603 – 2299 8989
Laman Web (Web) : www.myipo.gov.my

APPLICATION NO.	: PI 2014704013
GRANT NO.	: MY-172594-A
OWNER	: UNIVERSITI TEKNOLOGI MARA
DATE OF GRANT AND PUBLICATION	: 4 DECEMBER 2019
APPLICANT'S/AGENT'S REF.	: PT/5105/UITM/14

NOTICE OF GRANT

The purpose of this notice is to advise you that a patent/utility innovation has been granted on the above application.

Please find enclosed a certificate of grant with a copy of the patent/utility innovation together with a copy of the Examiner's final report (if not previously provided) in accordance with Section 31 (2)(a) of the Patents Act.

Copies of the Patent/utility innovation were made available to the public on the date of grant. A reference to the grant will be published in the Gazette as soon as possible.

Your attention is drawn to the need to pay annual renewal fees in order to keep the patent/utility innovation in force (see Section 35(2) and (3) of the Patents Act and Schedule 1 of the Regulations).

Date : 04 DECEMBER 2019

(AHMAD HAZLI MOHD HISHAM)
For Registrar of Patents
hazli@myipo.gov.my
03-2299 8847

To : LOK CHOON HONG
C/O PINTAS CONSULTING GROUP SDN. BHD.
NO. 19, JALAN SS 1/36
47300 PETALING JAYA SELANGOR
MALAYSIA

(Agensi di bawah Kementerian Perdagangan Dalam Negeri Dan Hal Ehwal Pengguna)

Automotive Engineering 11.06.2014

High strength cellular aluminium foam for the automotive industry

innovations report

Aluminium foam exhibits unique properties when compared to its dense form, particularly its lightweight characteristics. Generally, the foam can be divided into two categories; closed cell and open cell, both have different characteristics and applications.

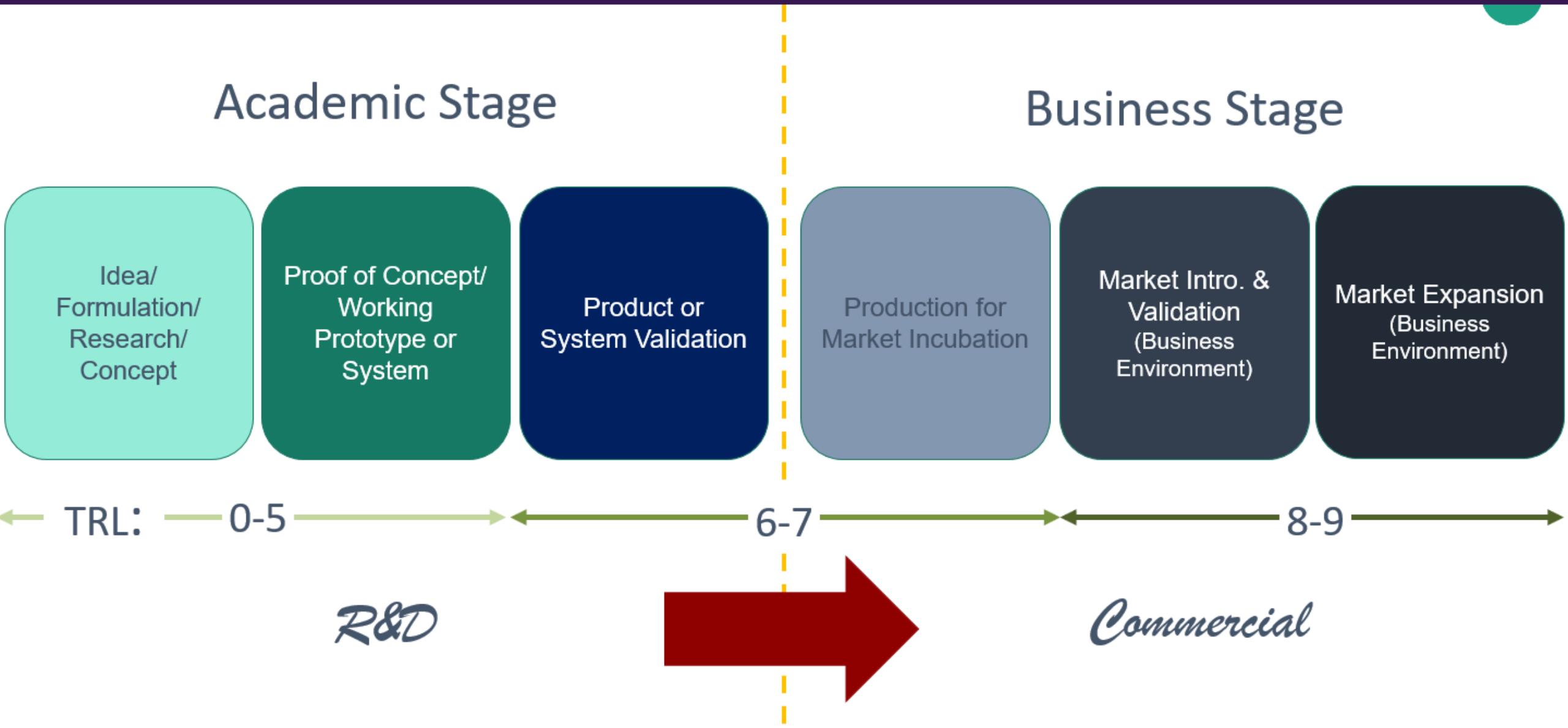
The features of the closed cell are, the pores structure is isolated and they are not connected to each other. This type of aluminium foam is suitable for application that requires high level of energy and sound absorption characteristics. It has been used widely in many structural parts, particularly in areas exposed to high damping capacity, for example in the automotive front bumper component.

The materials (NaCl, central aluminium core and dense Aluminium ingot) are placed in the cylindrical steel mould and heated at temperature range between 670 and 700oC. The NaCl is placed at the bottom mould with aluminium central pillar and bulk Aluminium placed at the top of NaCl so that after the aluminium turns into liquid, it penetrates along the interstitial spaces between NaCl. Upon solidification, the part is removed from the mould and further machining is carried out to remove surface roughness caused by the solidification process. The part is then leached in an ultrasonic water bath in order to remove the NaCl completely.

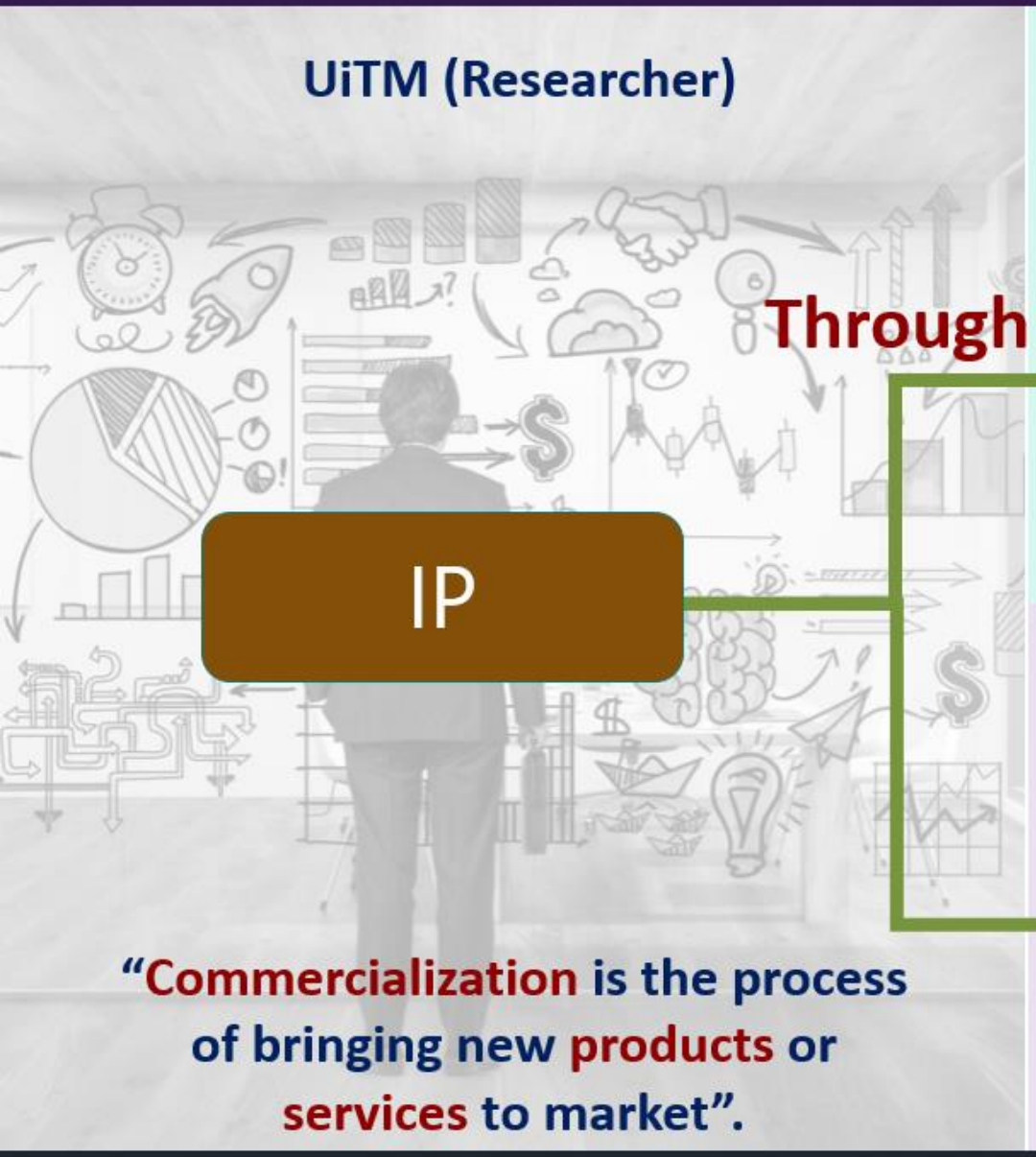
The final product is the cellular aluminium foam exhibiting excellent interconnected pores structure with dense central pillar. The central solid pillar provides extra strength for the surrounded foam structure. The foams structure produced was examined for its density, porosity and strength by compression test. Thermal conductivity was also carried out to investigate the effect of space holder size and the NaCl fractions on the final properties.

MUHAMMAD HUSSAIN BIN ISMAIL
Faculty of Mechanical Engineering
University Teknologi MARA, Malaysia

PRODUCT/TECHNOLOGY GENERAL PROCESS



COMMERCIALIZATION



UiTM (Researcher)

IP

Through BITCOM

Industries : SME, Manufacturing comp, Bank, MNC, GLC, University, etc.

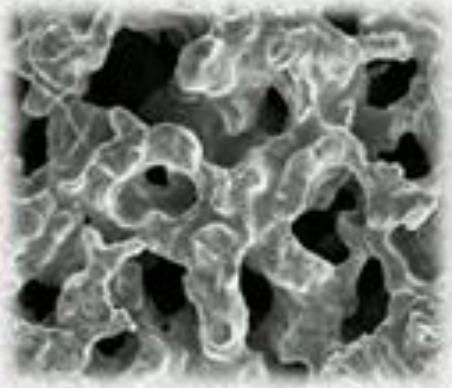
Licensing/ Outright/ Tech Know How/ Royalty/ Sales/ Commission

Start-up & Spin-off (Researcher)

Licensing

"Commercialization is the process of bringing new products or services to market".

The Journey of Porous NiTi alloy



Achievement

Pecipta'17

ITEX 17 MALAYSIA

iENA

iidex 2016

• E-DANA (RM2.1mil)

• INNO FUND (RM370k)
• PRGS (RM198k)

• REI (RM32k)
• GIP (RM20k)

• FRGS (RM112k)
• CRADLE (RM150k)

• FRGS (RM94k)
• RACE (RM50k)

KPT

Cradle

MOSTI

2012
• PhD

2015
• Prototype Development

2017

2020

The University Of Sheffield.

The first prototype porous NiTi dental implant

MTDC
MySymbiosis 2014

1 patent granted : MY-173241-A

1 patent filed in Korea : PI 2018703906

Faculty of Mechanical Engineering
Faculty of Dentistry

UNIVERSITI TEKNOLOGI MARA

Industrial Partner :
Nitium Technology Sdn. Bhd

NITIUM TECHNOLOGY

Major problem with common metallic implants…

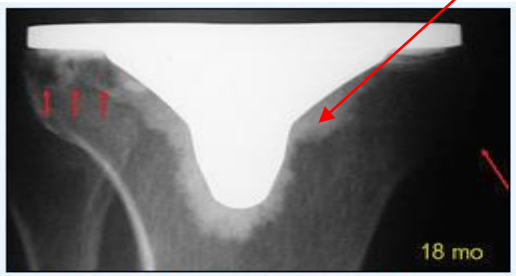
>>mismatch of Young's modulus between the implants and the replaced bones (Assad et al, 2003, Bansiddhi and Dunand, 2008)

- titanium alloys (110 GPa)
- stainless steel (210 GPa)
- bulk NiTi (48 GPa)

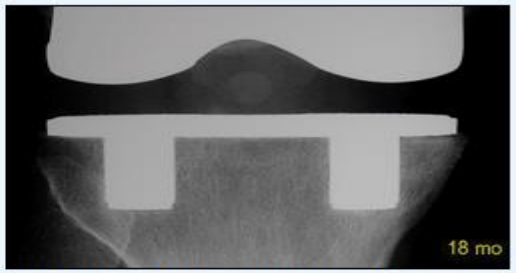
>> Hard tissue (≤ 20 GPa)

Negative Effect

Stress shielding - reduction in bone density (osteopenia) as a result of removal of normal stress from the bone by an implant



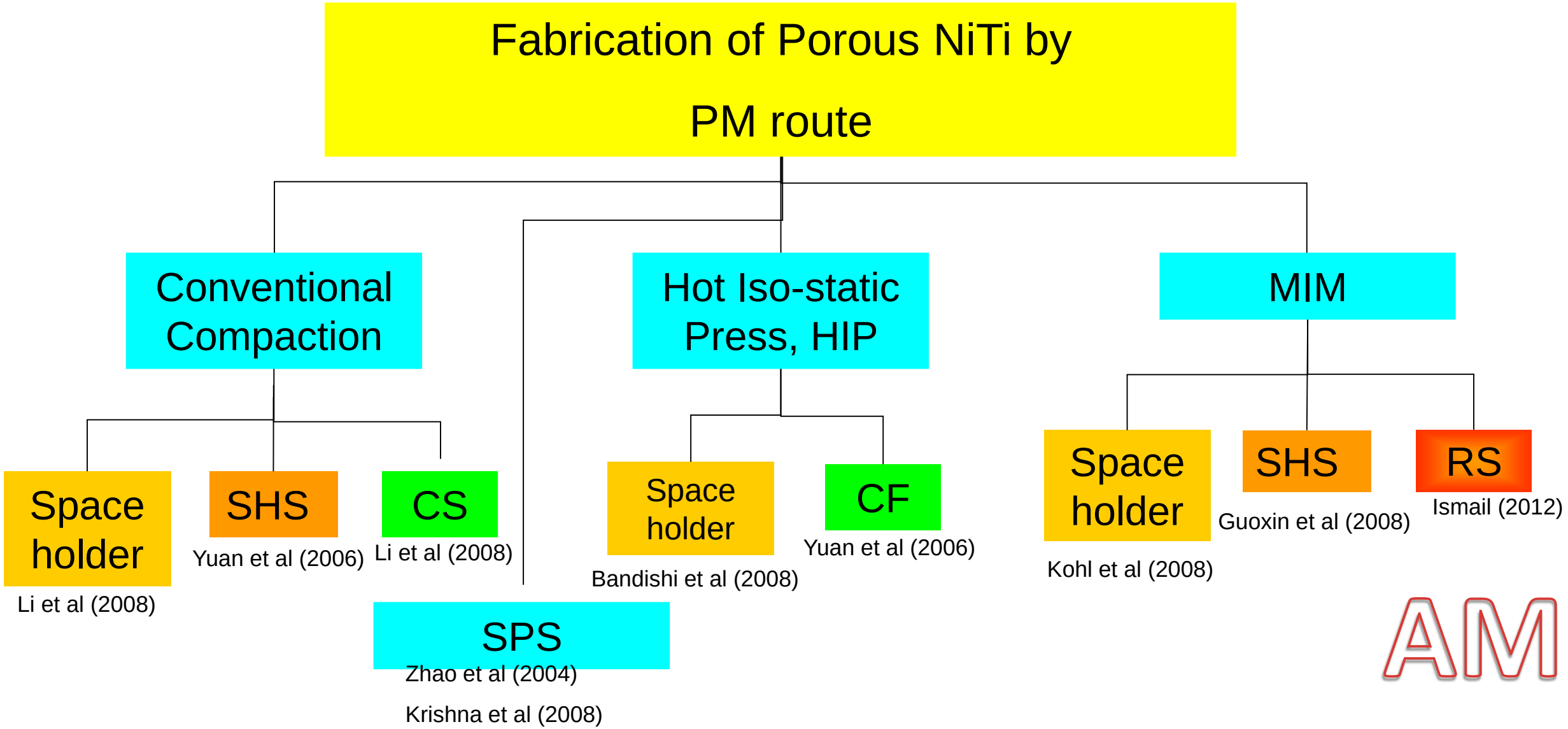
An example of severe stress shielding at 18 months with rigid tibial tray design.



An example of excellent bone response without stress shielding in an isoelastic tibial design at 18 months.

Source : *Susan M. Rapp*, *ORTHOPEDICS TODAY* 2008; 28:78 at www.orthosupersite.com/view.asp?rID=26708

Processing of porous NiTi alloy



SHS – **S**elf-propagating **H**igh **S**intering temperature

SPS – **S**park **P**lasma **S**intering

CS – **C**onventional **S**intering

CF – **C**apsule **F**ree

RS – **R**eactive **S**intering

Motivation… benchmarking

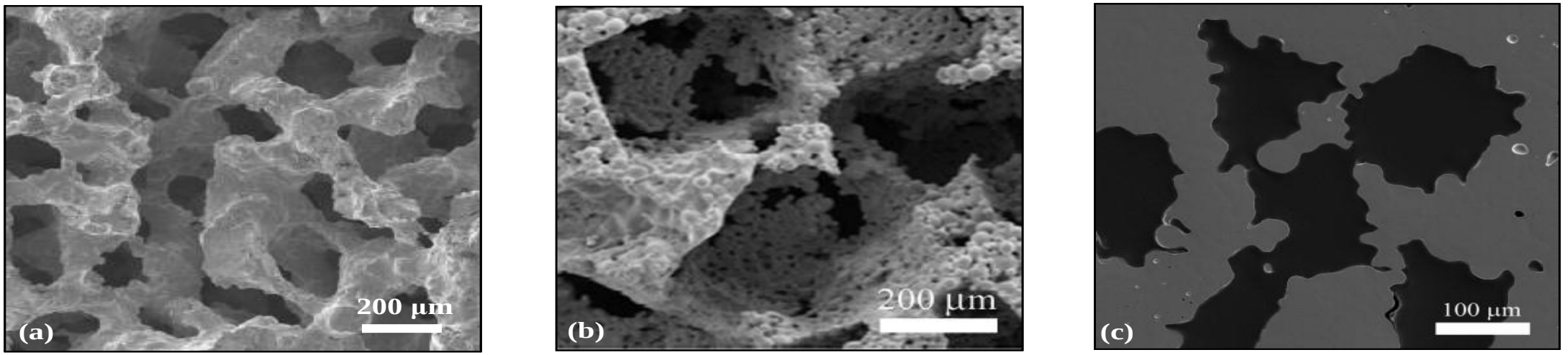
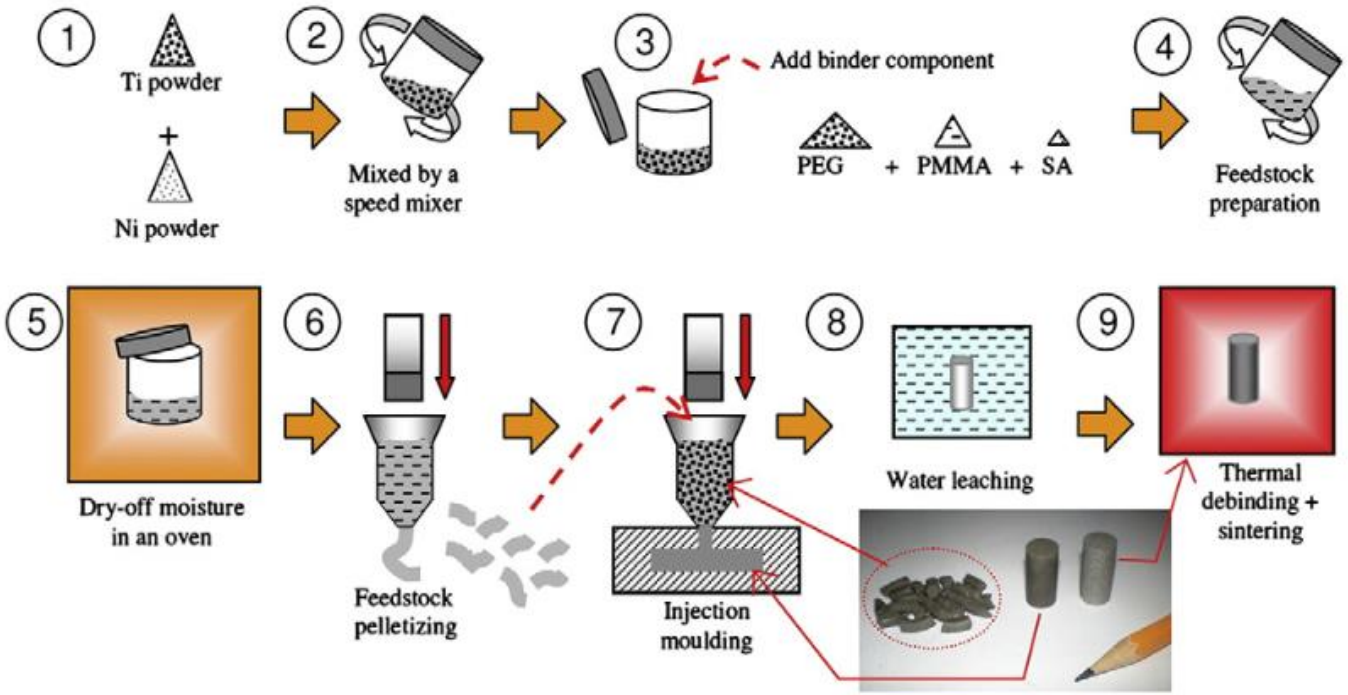
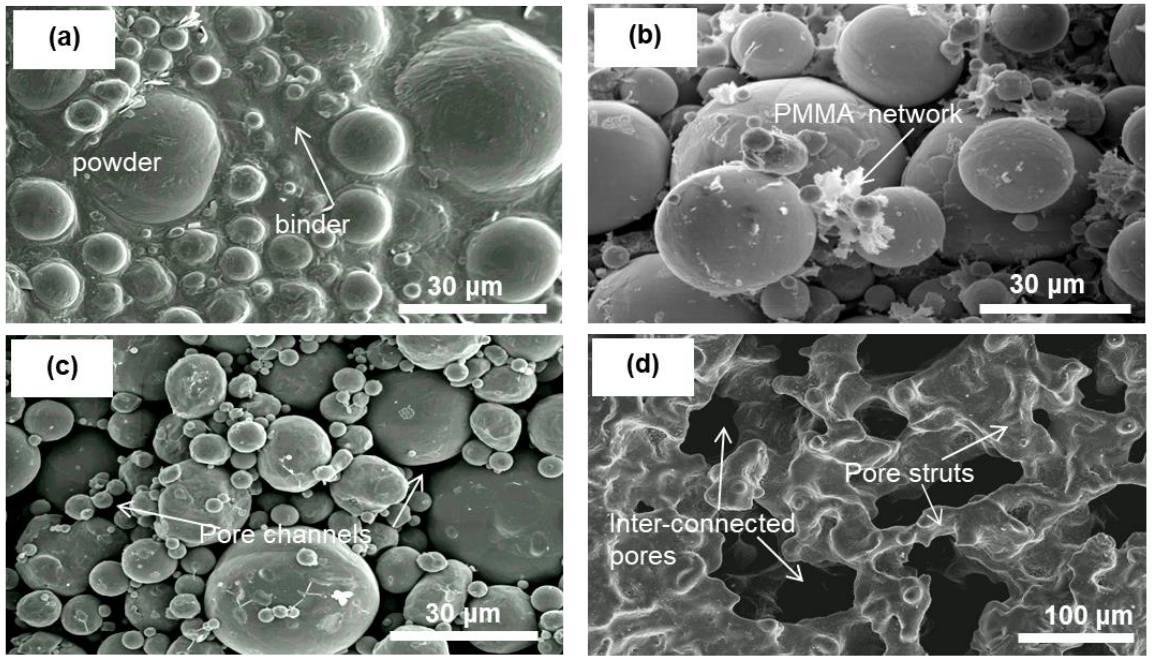


Figure: SEM micrographs of porous NiTi produced by different powder metallurgy (PM) routes (a) SHS process (65 ± 10% porosity, 100–360 µm) **(Assad et al, 2003)** (b) MIM using NaCl as a space-holder (pre-alloyed powders, 70% porosity, 355–500 µm) **(Kohl et al, 2008)** and (c) HIP of pre-alloyed powders, 32–36% open pores ,70–400 µm in size **(Bansiddhi et al, 2008)**



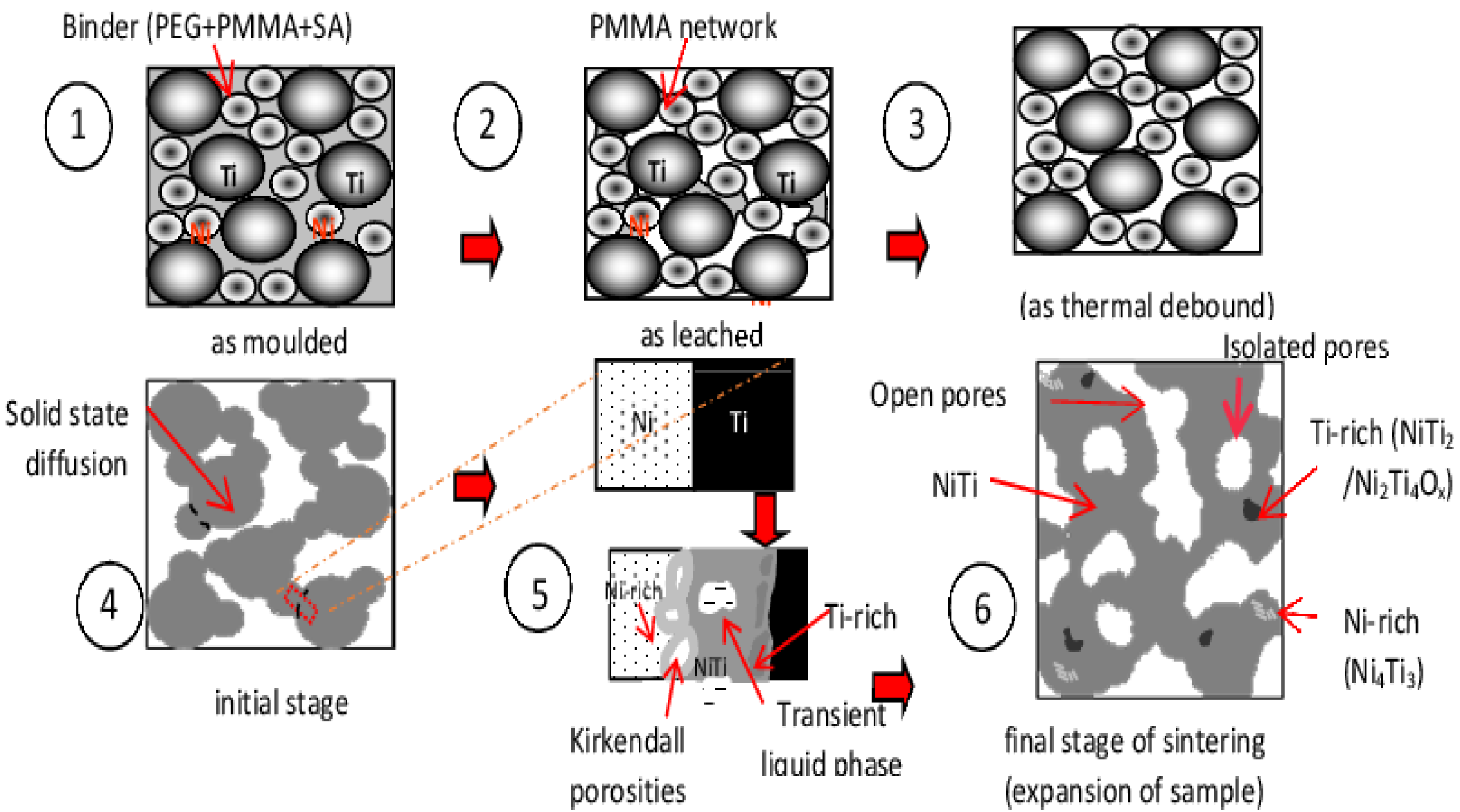
MIM processing of porous NiTi with a speed mixer samples in the previous research

Source : Ismail et al. (2012) *Formation of microporous NiTi by transient liquid phase sintering of elemental powders,* Materials Science and Engineering: C Vol 32, pg 1480-1485



SEM images showing microstructural changes during processing. (a) as-moulded, (b) as-leached, (c) as-thermal debound and (d) as-sintered at 1250°C.

Source : Ismail et al. (2012) Porous NiTi alloy by metal injection moulding / sintering of elemental powders: Effect of sintering temperature, Materials Letters Vol 70, pg 142-145



Schematic diagram of the proposed mechanism for pore formation in the samples examined.

Source : Ismail et al. (2012) *Formation of microporous NiTi by transient liquid phase sintering of elemental powders* Materials Science and Engineering: C Vol 32, pg 1480-1485

PERBADANAN HARTA INTELEK MALAYSIA
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MALAYSIA

Tel : +603 – 2299 8400
Faks (Fax) : +603 – 2299 8989
Laman Web (Web) : www.myipo.gov.my

APPLICATION NO. : UI 2015700327
GRANT NO. : MY-173241-A
OWNER : UNIVERSITI TEKNOLOGI MARA
DATE OF GRANT AND PUBLICATION : 8 JANUARY 2020
APPLICANT'S/AGENT'S REF. : PTA8.14

NOTICE OF GRANT

The purpose of this notice is to advise you that a patent/utility innovation has been granted on the above application.

Please find enclosed a certificate of grant with a copy of the patent/utility innovation together with a copy of the Examiner's final report (if not previously provided) in accordance with Section 31 (2)(a) of the Patents Act.

Copies of the Patent/utility innovation were made available to the public on the date of grant. A reference to the grant will be published in the Gazette as soon as possible.

Your attention is drawn to the need to pay annual renewal fees in order to keep the patent/utility innovation in force (see Section 35(2) and (3) of the Patents Act and Schedule 1 of the Regulations).

Date : 8 JANUARY 2020

(AHMAD HAZLI MOHD HISHAM)
For Registrar of Patents
✉hazli@myipo.gov.my
☎03-2299 8847

To : YIP JIUN HANN
C/O TRADEMARK2U SDN. BHD.
NO. 1, BLOK C, JALAN DATARAN SD 1
DATARAN SD, PJU 9, BANDAR SRI DAMANSARA
52200 WILAYAH PERSEKUTUAN KUALA LUMPUR
MALAYSIA

TRADEMARK2U
INTELLECTUAL PROPERTY

Ref : 2020/PT/TMI/PTA8.14/GRT/0099/TBG
Date : 17 FEBRUARY 2020

By email

UNIVERSITI TEKNOLOGI MARA
RESEARCH INNOVATION BUSINESS UNIT (RIBU)
KOLEJ KENANGA 2,
UNIVERSITI TEKNOLOGI MARA,
40450 SHAH ALAM, SELANGOR.
[Attn: Pn. Mardiah Hayati Abu Bakar]

Dear Sir/Madam,

UTILITY INNOVATION APPLICATION GRANT: "A METHOD OF PRODUCING A DENTAL IMPLANT ARTICLE WITH NICKEL TITANIUM ALLOY" FILING NO: UI 2015700327 IN MALAYSIA

Filing Date : 30 JANUARY 2015
Applicant : UNIVERSITI TEKNOLOGI MARA

We are pleased to inform you that your above-mentioned patent application has complied with the requirements of the Patent Act 1983 and Patents Regulations 1986. Please find attached herewith a copy of the Substantive Examination Clear Report and notice of grant for your retention.

We are of the opinion that the application will proceed to grant of patent by requesting the certificate from MyIPO. The cost for **grant and certificate fee** will be **RM 1,060.00 (price inclusive 6% of SST)**

We would greatly appreciate if you can confirm your decision on the above matter by ticking in the applicable box below, and return a signed copy of this letter to us via email.

We would like to thank you for entrusting us to provide you with our professional service and look forward to serving you again for future cases. Please feel free to contact us should you require further information. Thank you.

*Please tick in the applicable box

☐ Proceed with grant of UI application
☐ Abandon application & Close file

We hereby confirm our decision above

Yours truly,
TRADEMARK2U SDN BHD

boon

TAN BOON GAIK
(PATENT DEPARTMENT)

Name:
Company Seal:

TRADEMARK2U SDN BHD (670910-M)
Registered Trademark, Industrial Design, Patent Agent/Consultant
GST ID NO: 000 1514 29120
No. 1, Block C, Jalan Dataran SD 1, Dataran SD PJU 9,
Bandar Sri Damansara, 52200 Kuala Lumpur, Malaysia.
Tel: (603) 6274 5352 Fax: (603) 6274 4795, 6273 6388
Email: sales@trademark2u.my Website: www.trademark2u.my

MyIPO
PERBADANAN HARTA INTELEK MALAYSIA
INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA

UiTM di hatiku

IPR

Our ref : PT/6555/Nitium/18 (Jia Yin)
Your Ref : -Please advice-
25th October 2018

PINTAS

Patent, Trademark, Industrial Design Registration & Copyright Protection

International Intellectual Property Registration & Enforcement

Technology Transfer & Commercialisation

Intellectual Property Strategy & Incentives Facilitation

Nitium Technology Sdn Bhd
B-1-16 Vista Alam, Jalan Ikhtisas 14/1,
Seksyen 14,
40000 Shah Alam, Selangor.

By Email (mzhzam@gmail.com) &
Confirmation by Post

Attn: Mr Mohd Zamzuree

Dear Sir,

RE : PATENT APPLICATION IN MALAYSIA
APPLICANT : NITIUM TECHNOLOGY SDN BHD
INVENTION : METHOD FOR PRODUCING POROUS MEDICAL IMPLANT

1. We refer to the above matter. We are pleased to inform you that the aforesaid application has been allotted the following filing particulars:

Patent Application No. : PI 2018703906
Filing Date : 23 OCTOBER 2018

2. We enclose herewith the document as filed and receipt of Electronic Submission from Malaysian Patent Office (MyIPO) for your reference and records. We will send you the Certificate of Filing once we receive the same from the Malaysian Patent Office. This normally will take three month from the date of filing.

3. As from the date of filing the application, you may disclose the details of the invention without prejudice to obtaining a Malaysian patent based on this application, or a patent in any other countries based on an application which claims the priority of the Malaysian filing date. In order to benefit from the Malaysian filing date, any foreign patent application must be filed within 12 months that is by 23 October 2019 at the latest. This 12 months period for filing in any foreign patent is non-extendable.

4. Please note that a request for Substantive Examination should be filed within 18 months from the Malaysian filing date, i.e. 23 April 2020. The effect of filing in the request is to commence the substantive examination process for your patent application. Failure to make a request by the due date may cause the patent application to be deemed withdrawn.

5. We would like to take this opportunity to thank you for entrusting us to file these application on your behalf. Should you have further queries, please do not hesitate to contact Ms Jia Yin at 03-78765050 (ext 133) or patent10@pintas-ip.com for clarification.

Yours sincerely,

LOK CHOON HONG
Director

MALAYSIA OFFICE
SINO FAME LIMITED
No. 19, Jalan SS 1/36,
47300 Petaling Jaya, Selangor.
T : (603) 7876 5050 F : (603) 7876 2676

SINGAPORE OFFICE
SINO FAME LIMITED
Block 116, Jalan Bukit Merah, #05-1656
Singapore 160116
T : (65) 6250 2070 F : (65) 6737 1805

Patents Form No.1 PATENTS ACT 1983 REQUEST FOR GRANT OF PATENT (Regulations 7(1)) To: The Registrar of Patents Patents Registration Office Kuala Lumpur, Malaysia	For Official Use APPLICATION NO: **PI 2018703906** Filing Date: **23/10/2018** Fee received on: **23/10/2018** Amount: **RM400**
Please submit this Form in duplicate together with the prescribed fee	Applicant's file reference: **PT/6555/NITIUM/18**

THE APPLICANT(S) REQUEST(S) THE GRANT OF A PATENT IN RESPECT OF THE FOLLOWING PARTICULARS:
I. TITLE OF INVENTION: **METHOD FOR PRODUCING POROUS MEDICAL IMPLANT**

II. APPLICANT(S) (the data concerning each applicant must appear in this box or , if the space insufficient, in the space below):

Name: **NITIUM TECHNOLOGY SDN BHD**
I.C./Passport No:
Address: **B-1-16, VISTA ALAM, JALAN IKHTISAS 14/1, SEKSYEN 14 40000 SHAH ALAM SELANGOR MALAYSIA**
Nationality:

Name: **UNIVERSITI TEKNOLOGI MARA (UITM)**
I.C./Passport No:
Address: **RESEARCH INNOVATION BUSINESS UNIT (RIBU) UITM-MTDC TECHNOPRENEUER CENTER, UNIVERSITI TEKNOLOGI MARA 40450 SHAH ALAM SELANGOR MALAYSIA**
Nationality:

Address for service in Malaysia: **C/O PINTAS IP GROUP SDN. BHD., NO. 19, JALAN SS 1/36, PETALING JAYA 47300 SELANGOR DARUL EHSAN MALAYSIA**
* Permanent resident or principal place of business:
Telephone Number (if any) Fax Number (if any) Additional Information (if any)

Additional Information (if any)

III.INVENTOR:

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **MUHAMMAD ASIF BIN AHMAD KHUSHAINI**
Address: **B-1-16, VISTA ALAM, JALAN IKHTISAS 14/1, SEKSYEN 14 40000 SHAH ALAM SELANGOR MALAYSIA**

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **MOHD ZAMZUREE BIN HASHIM**
Address: **B-1-16, VISTA ALAM, JALAN IKHTISAS 14/1, SEKSYEN 14 40000 SHAH ALAM SELANGOR MALAYSIA**

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **MOHD ZUL IMAN BIN MOHD YUSUF**
Address: **B-1-16, VISTA ALAM, JALAN IKHTISAS 14/1, SEKSYEN 14 40000 SHAH ALAM SELANGOR MALAYSIA**

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **NOOR AZMI BIN JAAFAR**
Address: **B-1-16, VISTA ALAM, JALAN IKHTISAS 14/1, SEKSYEN 14 40000 SHAH ALAM SELANGOR MALAYSIA**

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **MUHAMMAD HUSSAIN BIN ISMAIL**
Address: **FAKULTI KEJUTERAAN MEKANIKAL, UNIVERSITI TEKNOLOGI MARA (UITM) 40450 SHAH ALAM SELANGOR MALAYSIA**

Applicant is the inventor: Yes No √
If the applicant is not the inventor
Name: **ROHANA BINTI AHMAD**
Address: **FAKULTI PERGIGIAN, UNIVERSITI TEKNOLOGI MARA (UITM) KAMPUS SG. BULOH, JALAN HOSPITAL 47000 SG. BULOH SELANGOR MALAYSIA**

A statement justifying the applicant's to the patent accompanies this Form
Yes √ **No**

Additional Information (if any)

IV. AGENT OR REPRESENTATIVE:

PERBADANAN HARTA INTELEK MALAYSIA
INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA

UiTM *di hatiku*

IPR

PINTAS

Your Ref: -please advise-
Our Ref: PT/6555/Nitium/18/KR (dilla)

2nd December 2019

UNIVERSITI TEKNOLOGI MARA
Research Innovation Business Unit (RIBU)
Institute of Research Management & Innovation (IRMI)
UiTM-MTDC Technopreneur Centre
Universiti Teknologi MARA
40450 Shah Alam, Selangor
Attn: Farizah Mohamed Isa

By Email (farizah07@uitm.edu.my).
& Confirmation by Post

Dear Sir/Madam,

RE: NEW CONVENTIONAL FILING INTO KOREA
KOREA PATENT APPLICATION NO. 10-2019-0132057
KOREA FILING DATE.: 23RD OCTOBER 2019
BASED ON PRIORITY APPLICATION NO.: PI 2018703906
APPLICANT : 1)NITIUM TECHNOLOGY SDN BHD
2) UNIVERSITI TEKNOLOGI MARA (UITM)
ARTICLE : METHOD FOR PRODUCING POROUS MEDICAL IMPLANT

1. We refer to the above-mentioned matter.
2. We are pleased to report that we have filed the above-mentioned patent application into Korea in accordance with your instruction.
3. Please find enclosed herewith a copy of the application as filed for your records.
4. We also enclose our invoice no. PF70407 being our fee for attending to the above-mentioned matter for your safe records.
5. We thank you for entrusting us with this application. Should you need any further information,please do not hesitate to contact Mr Samuel Wong or Ms. Dilla at 03-7876 5050 (ext. 137) or patent23@pintas-ip.com for clarifications.

Yours faithfully,
PINTAS CONSULTING GROUP SDN BHD

LOK CHOON HONG
Director

PINTAS

Your Ref: -please advise-
Our Ref: PT/6555/Nitium/18/KR (dilla)

2nd December 2019

NITIUM TECHNOLOGY SDN BHD
B-1-16 Vista Alam, Jalan Ikhtisas 14/1,
Sekayen 14,
40000 Shah Alam, Selangor
Attn: Asif Khushaini

By Email (farizah07@uitm.edu.my).
& Confirmation by Post

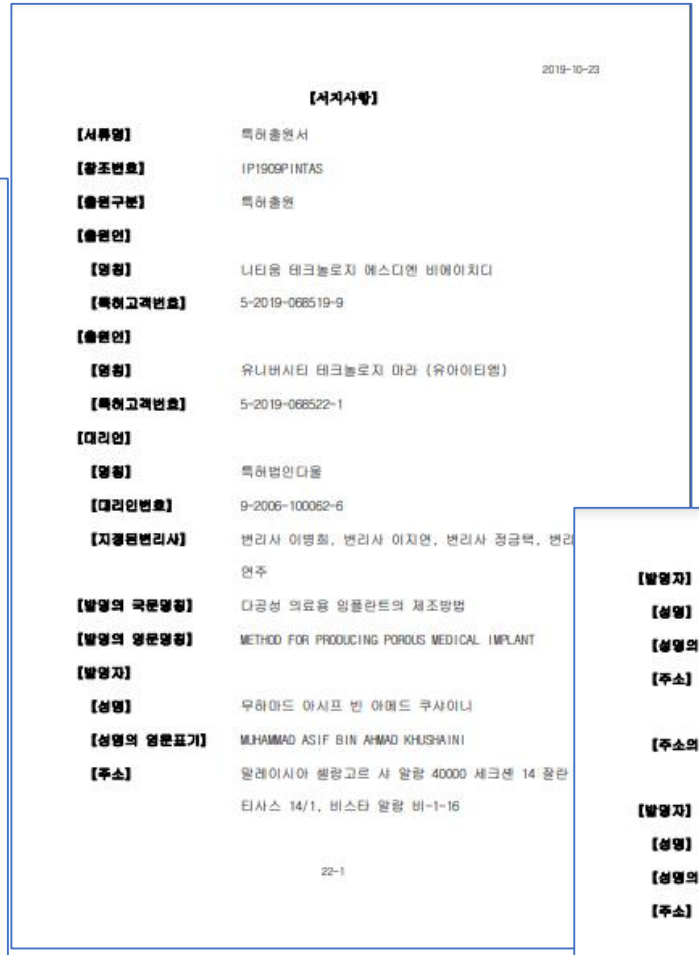
Dear Sir/Madam,

RE: NEW CONVENTIONAL FILING INTO KOREA
KOREA PATENT APPLICATION NO. 10-2019-0132057
KOREA FILING DATE.: 23RD OCTOBER 2019
BASED ON PRIORITY APPLICATION NO.: PI 2018703906
APPLICANT : 1)NITIUM TECHNOLOGY SDN BHD
2) UNIVERSITI TEKNOLOGI MARA (UITM)
ARTICLE : METHOD FOR PRODUCING POROUS MEDICAL IMPLANT

1. We refer to the above-mentioned matter.
2. We are pleased to report that we have filed the above-mentioned patent application into Korea in accordance with your instruction.
3. Please find enclosed herewith a copy of the application as filed for your records.
4. We also enclose our invoice no. PF70408 being our fee for attending to the above-mentioned matter for your safe records.
5. We thank you for entrusting us with this application. Should you need any further information,please do not hesitate to contact Mr Samuel Wong or Ms. Dilla at 03-7876 5050 (ext. 137) or patent23@pintas-ip.com for clarifications.

Yours faithfully,
PINTAS CONSULTING GROUP SDN BHD

LOK CHOON HONG
Director

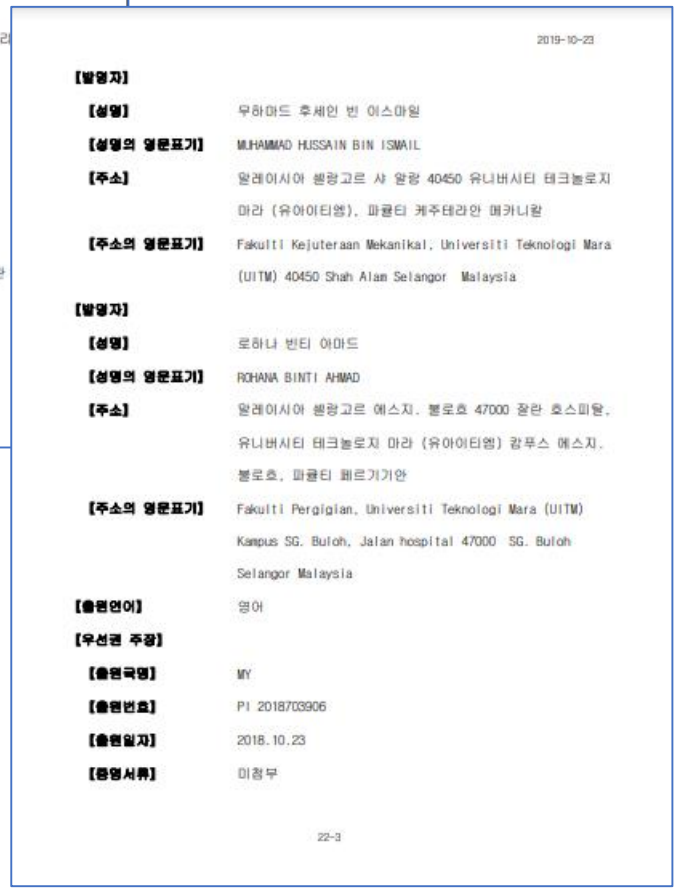


2019-10-23

【서지사항】

【서류명】	특허출원서
【참조번호】	IP1909PINTAS
【출원구분】	특허출원
【출원인】	
【명칭】	니티움 테크놀로지 에스디엔 비에이치디
【특허고객번호】	5-2019-068519-9
【출원인】	
【명칭】	유니버시티 테크놀로지 마라 (유아이티엠)
【특허고객번호】	5-2019-068522-1
【대리인】	
【명칭】	특허법인다올
【대리인번호】	9-2006-100062-6
【지정된변리사】	변리사 이병희, 변리사 이지연, 변리사 정금택, 변리사 연주
【발명의 국문명칭】	다공성 의료용 임플란트의 제조방법
【발명의 영문명칭】	METHOD FOR PRODUCING POROUS MEDICAL IMPLANT
【발명자】	
【성명】	무하마드 아시프 빈 아메드 쿠샤이니
【성명의 영문표기】	MUHAMMAD ASIF BIN AHMAD KHUSHAINI
【주소】	말레이시아 셀랑고르 사 알랑 40000 세크센 14 잘란 티사스 14/1, 비스타 알랑 비-1-16

22-1



2019-10-23

【발명자】	
【성명】	무하마드 후세인 빈 이스마일
【성명의 영문표기】	MUHAMMAD HUSSAIN BIN ISMAIL
【주소】	말레이시아 셀랑고르 사 알랑 40450 유니버시티 테크놀로지 마라 (유아이티엠), 파큘티 케주테라안 메카니칼
【주소의 영문표기】	Fakulti Kejuteraan Mekanikal, Universiti Teknologi Mara (UITM) 40450 Shah Alam Selangor Malaysia
【발명자】	
【성명】	로하나 빈티 아마드
【성명의 영문표기】	ROHANA BINTI AHMAD
【주소】	말레이시아 셀랑고르 에스지. 불로호 47000 잘란 호스피탈, 유니버시티 테크놀로지 마라 (유아이티엠) 캄푸스 에스지. 불로호, 파큘티 페르기기안
【주소의 영문표기】	Fakulti Pergigian, Universiti Teknologi Mara (UITM) Kampus SG. Buloh, Jalan hospital 47000 SG. Buloh Selangor Malaysia
【출원언어】	영어
【우선권 주장】	
【출원국명】	MY
【출원번호】	PI 2018703906
【출원일자】	2018.10.23
【증명서류】	미첨부

22-3

Patent filing in Korea

UiTM di hatiku

UiTM Symbiosis Program, 2014

Replication process for 1st prototype, 2016

Search Facebook

Muhammad Hussain








Universiti Teknologi MARA - Media Rasmi's albums

MoU Universiti Teknologi MARA dan NITIUM Technology Sdn Bhd

23 November 2017 - Majlis Pertukaran Memorandum Persefahaman antara Universiti Teknologi MARA dan NITIUM Technology Sdn Bhd telah berlangsung di Canseleri Tuanku Syed Sirajuddin, UiTM Shah Alam.

23 November 2017 ·

19 1 comment 2 shares

Like Comment Share

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Securing MOSTI INNO-FUND 2017

Completed in July 2018

Securing MOSTI R&D FUND 2020

NITIUM TECHNOLOGY

Our Ref. : Admin/19-017
Your Ref. :
Date : 23rd May 2019

To:
Associate Prof. Dr. Muhammad Hussain bin Ismail
Faculty of Mechanical Engineering,
Universiti Teknologi MARA (UiTM),
Menara 1, Kompleks Kejuruteraan,
40450, Shah Alam,
Selangor Darul Ehsan

Dear Prof. Dr. Hussain

Appointment Letter as Collaborator for R&D MESTECC Grant Project Title "Clinical Trial Of The World First Porous Nickel Titanium Dental Implant"

We refer to matter above, Nitium Technology Sdn. Bhd. would like to appoint you as a collaborator for our next grant application under Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC). In accordance with your expertise and experience in the area, we believe that your guidance and advice is crucial to ensure the company's success. The scope of collaboration will include the technical advisory for these following subjects;

1) Material and Production
2) Quality Control/Assurance

In continuation of our previous collaboration in the development of the product, we are now entering the final stage of pre-commercialization i.e. The clinical studies. As it is the most important stage of the product development, we are looking forward to work with you upon receiving your reply regarding the appointment. All the details concerning the project will be discussed further..

Thank you

Yours faithfully

NITIUM TECHNOLOGY SDN. BHD.

Muhammad Asif Bin Ahmad Khushaini
Chief Executive Officer (CEO) / Director

NITIUM TECHNOLOGY SDN. BHD. (1192503-T)
B-1-16, Vista Alam, Jalan Ikhtisas 14/1,
Seksyen 14, 40 000 Shah Alam, Selangor Darul Ehsan, Malaysia

www.uitm.edu.my

Fakulti Kejuruteraan Mekanikal
Faculty of Mechanical Engineering

Universiti Teknologi MARA
40450 Shah Alam, Selangor, MALAYSIA
Tel : (+603) 5543 5161
Faks : (+603) 5543 5160
http://fkm.uitm.edu.my/

UNIVERSITI TEKNOLOGI MARA

Ref. No : 100-FKM (PTA 17/1)
Date : 30 May 2019

Muhammad Asif bin Ahmad Khushaini
Chief Executive Officer
Nitium Technology Sdn Bhd
B-1-16 Vista Alam
Jalan Ikhtisas 14/1 Seksyen 14
40000 Shah Alam

Dear Mr. Asif,

LETTER OF ACCEPTANCE AS PROJECT COLLABORATOR FOR R&D MESTECC GRANT

PROJECT TITLE : CLINICAL TRIAL OF THE WORLD FIRST POROUS NICKEL TITANIUM DENTAL IMPLANT

In response to your letter dated 23rd May 2019 with your reference: Admin/19-017, I am pleased to accept your offer as a Project Collaborator for the development of your product: **Porous Nickel Titanium Dental Implant.**

2. As mentioned in your letter, the scope of collaboration will include the technical advisory for these following subjects;
   a. Materials and Production
   b. Quality Control/Assurance

3. However, I strongly believe that further discussion is necessary in order to ensure this project is properly executed and therefore guarantee a successful outcome. Thank you for your appointment and I look forward to being part of the team.

Yours sincerely,

Assoc. Prof. Dr. Muhammad Hussain bin Ismail
Faculty of Mechanical Engineering,
Universiti Teknologi MARA (UiTM),
Menara 1, Kompleks Kejuruteraan,
40450, Shah Alam,
Selangor Darul Ehsan.

Pejabat Am / *General Office*
Tel: (+603) 5544 5191 / 5190 / 5162 / 5164 / 5142 / 5143 ↕ Faks: (+603) 5543 5160

KEMENTERIAN TENAGA, SAINS, TEKNOLOGI, ALAM SEKITAR DAN PERUBAHAN IKLIM
MINISTRY OF ENERGY, SCIENCE, TECHNOLOGY, ENVIRONMENT AND CLIMATE CHANGE

Aras 1-7, Blok C4 & C5, Kompleks C
Pusat Pentadbiran Kerajaan Persekutuan
62662 PUTRAJAYA
MALAYSIA

Sektor Tenaga
Aras 2, Blok E4/5, Kompleks E
Pusat Pentadbiran Kerajaan Persekutuan
62668 PUTRAJAYA
MALAYSIA

TEL : 603 - 8000 8000
FAKS : 603 - 8888 9070
Laman Web : www.mestecc.gov.my

SULIT

MESTECC/DANA/RND(S)/1-34 Jld. 2 (๐๑)
Februari 2020

Encik Mohd Zul Iman bin Mohd Yusuf
Nitium Technology Sdn. Bhd.
B-1-16, Vista Alam
Jalan Ikhtisas 14/1
Seksyen 14
40000 SHAH ALAM
Selangor

Tuan,

TAWARAN *MESTECC R&D FUND* BAGI PROJEK *CLINICAL TRIAL OF POROUS NICKEL TITANIUM DENTAL IMPLANT* (RD1019Q1346)

Dengan hormatnya saya merujuk kepada perkara tersebut di atas.

2. Sukacita dimaklumkan bahawa Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim telah meluluskan permohonan tuan untuk mendapatkan pembiayaan di bawah *MESTECC R&D Fund* bagi projek ***Clinical Trial of Porous Nickel Titanium Dental Implant*** **(RD1019Q1346)** berjumlah **RM2,171,400.00** dengan tempoh pelaksanaan selama **22 bulan**.

3. Untuk makluman tuan, peruntukan yang telah diluluskan ini adalah dalam bentuk geran bagi tujuan **membantu** pelaksanaan projek. Justeru itu, tuan juga hendaklah memberi keutamaan pada pelaksanaan projek. Pihak Kerajaan Malaysia juga mempunyai kuasa untuk meminda peruntukan yang telah diluluskan sekiranya mempunyai justifikasi yang kukuh untuk berbuat demikian..

SULIT

1/3

NITIUM TECHNOLOGY

Our Ref. : NTSB/01/20-05
Your Ref. :
Date : 2020/03/14

To:
Associate Prof. Dr. Muhammad Hussain bin Ismail
Faculty of Mechanical Engineering,
Universiti Teknologi MARA (UiTM),
40450, Shah Alam,
Selangor, Malaysia

Dear Associate Prof. Dr. Muhammad Hussain bin Ismail,

Letter of Appointment as Collaborator for Project: Clinical Trial of Porous Nickel Titanium Dental Implant

We refer to the above matter, Nitium Technology Sdn. Bhd. hereby appoint you as a collaborator for the project. We are pleased to inform you that Ministry of Science Technology and Innovation (MOSTI) has approved our funding application for this project with the awarded amount of RM2,171,400.00. The project will begin on 1st of April 2020 until 31st of January 2022.

Nitium Technology Sdn Bhd is an ISO 13485:2016 certified company that has been involved in research and development of medical devices with you and your team from Universiti Teknologi MARA (UiTM) since 2014. Together, we have successfully developed the world's first porous nickel-titanium dental implant system and the product has been filed for Malaysian patent in 2018 and South Korean's in 2019.

This project will be the final phase of product's R&D and it success will ensure smooth market entry in the future. Therefore, we look forward for your active participation in this project and hoping there will be a fruitful collaboration.

Thank you.

Best regard,

Muhammad Asif Ahmad Khushaini
Chief Executive Officer (CEO)
Nitium Technology Sdn Bhd.

NITIUM TECHNOLOGY SDN BHD (1192503-T)
B-1-16, Vista Alam, Jalan Ikhtisas 14/1,
Seksyen 14, 40000, Shah Alam, Selangor, Malaysia

1st defense, Sept 4, 2019

2nd defense, Jan 8, 2020

Innovation...never ending journey

Penyelidik UiTM rangkul tiga pingat emas di Jerman

KUALA LUMPUR 21 Nov. □ Para penyelidik Universiti Teknologi Mara (UiTM) berjaya merangkul tiga pingat emas ketika menyertai pameran perdagangan antarabangsa (IENA) di Nuremberg, Jerman awal bulan ini.

Dua pingat itu diperoleh oleh para penyelidik dari Fakulti Kejuruteraan Mekanikal diketuai oleh Muhammad Hussain Ismail.

Sebutir lagi pingat emas dimenangi pasukan dari Pusat Tanah Runtuh Negara (Nasec) UiTM yang diketuai oleh Profesor Dr. Roslan Zainal Abidin.

UiTM dalam satu kenyataan memberitahu, kejayaan itu membuktikan keupayaan institusi tersebut dalam menghasilkan produk penyelidikan bertaraf antarabangsa.

□□Institut Penyelidikan, Pembangunan dan Pengkomersialan (IRDC) UiTM akan terus berusaha untuk menjayakan misi bagi mendapatkan pengiktirafan antarabangsa.

□□Usaha ini seterusnya akan meletakkan penyelidikan UiTM dalam peta dunia sejaja dengan hasrat UiTM untuk mencapai taraf universiti kelas dunia menjelang tahun 2020,□□ kata kenyataan itu di sini hari ini.

IENA berlangsung dari 1 hingga 4 November lalu membabitkan penyertaan dari pelb negara seperti Amerika Syarikat, Rusia, Korea Selatan, Croatia dan Hong Kong.

Kongsi Kontan di :

New Straits Times, July 9, 2019


NEW STRAITS TIMES

A better alternative to dental implants

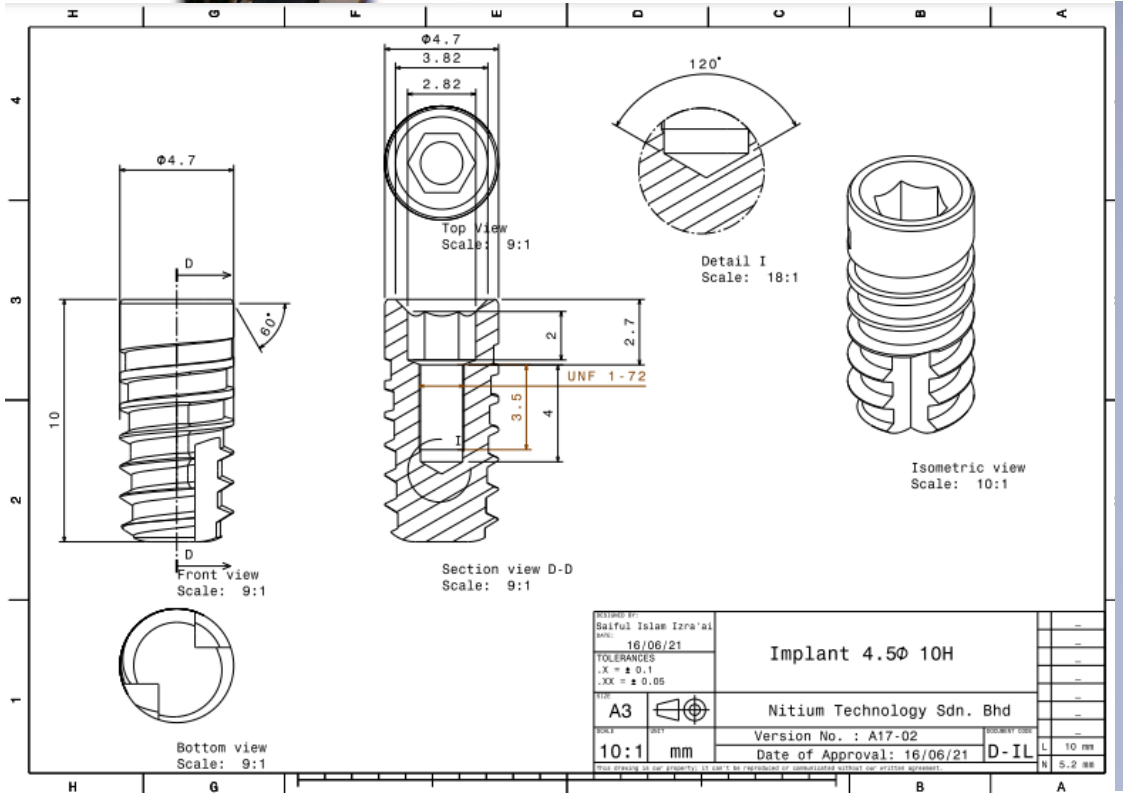
PIM Int. Magazine, July 10, 2019

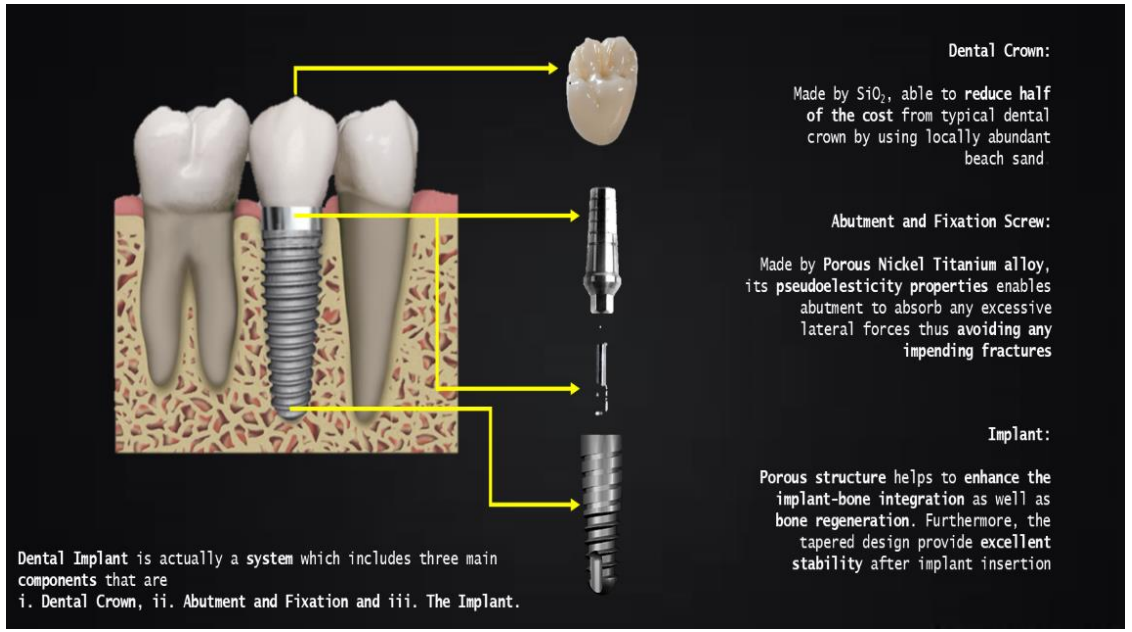

Researchers deliver biocompatible nickel-titanium alloy for alternative dental implants

https://www.pim-international.com/researchers-deliver-

Buletin Salam, UiTM, June 2019

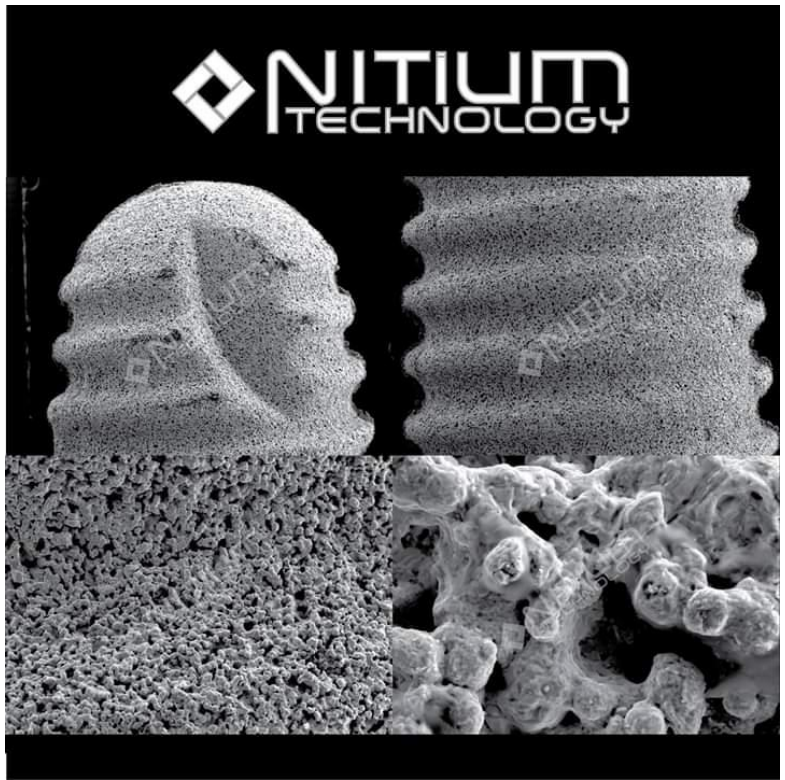

Focus




Dental Crown:
Made by SiO_2, able to reduce half of the cost from typical dental crown by using locally abundant beach sand
Abutment and Fixation Screw:
Made by Porous Nickel Titanium alloy, its pseudoelesticity properties enables abutment to absorb any excessive lateral forces thus avoiding any impending fractures
Implant:
Porous structure helps to enhance the implant-bone integration as well as bone regeneration. Furthermore, the tapered design provide excellent stability after implant insertion
Dental Implant is actually a system which includes three main components that are
i. Dental Crown, ii. Abutment and Fixation and iii. The Implant.


Comparison With Latest Product Available in Market
straumann
The Roxolid Standard Plus
≈ $400
The latest product from Straumann made from Titanium Zirconium alloy. Not a porous dental implant. They gladly announced that their revolutionary surface treatment namely the SLActive succesfully improved surface area up to 19.9% more (compare to polished surface). Using similar method and equipment of measuring the parameter, our implant provides 61.22% more which is three times as what Straumann had.
NITIUM TECHNOLOGY
≈ $130
ZIMMER BIOMET
Trabaecular Metal
≈ $1200
tenax implant
Sybron Implant Solutions
These are three known porous dental implant available in the market. Notice that all of them do not have the thread on the porous part of the implant. Without thread, no primary stability (immediate implant lock after insertion). Our implant is the first in the World to have threaded + porous.


Post micro-machining
As-sintered
UNIVERSITI TEKNOLOGI MARA
NITIUM TECHNOLOGY


NITIUM TECHNOLOGY


Porous Nickel Titanium dental implant (NiTiDent Tuah system)
2:44 / 3:16
Scroll for details

Histopathological Evaluation;

Subject: 10 New Zealand White Rabbits
Standard: GLP, ISO10993:6, ISO17025 (UKAS)

Porous NiTi VS Titanium Grade 5

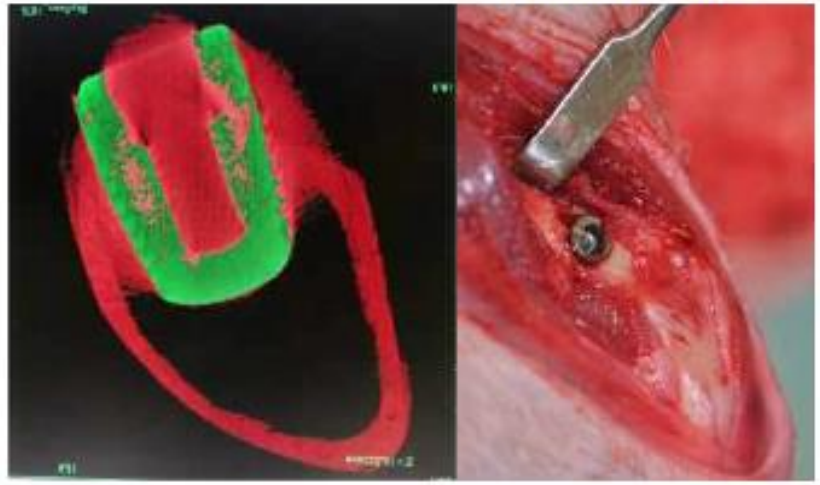
5.28/600 ***10.93/600***

Which mean, our Porous NiTi is **48% more biocompatible** than industry's standard titanium alloy!

Osseoincorporation evidence;

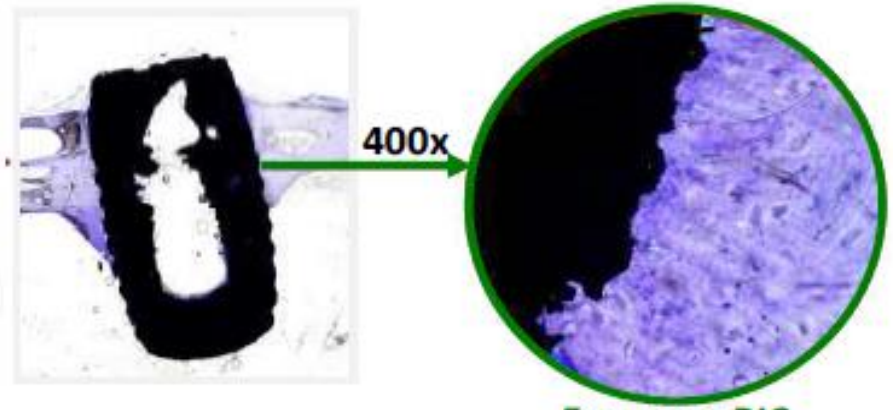
Subject: 12 New Zealand White Rabbits
Standard: ISO10993:6

In another comparative animal study on New Zealand White Rabbits showed that there is bone in-growth inside the implant (marked by the red spot area in the picture). In the same study, none were observed with commercially available Straumann implants.



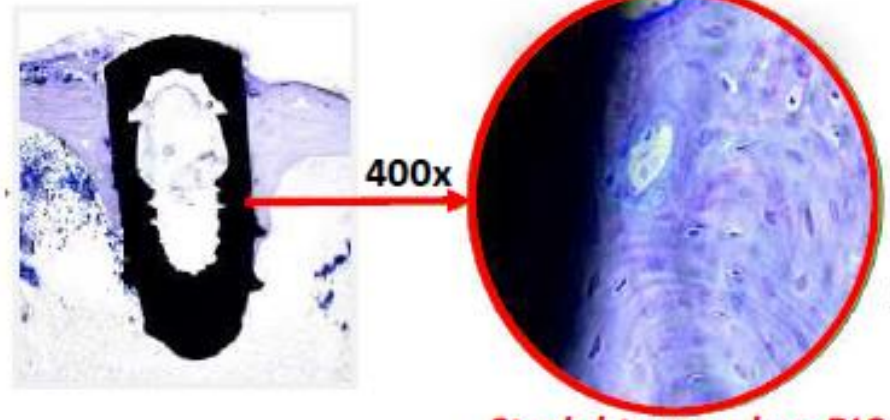
Superior bone-implant-contact (BIC);

NITIUM TECHNOLOGY



Far more BIC

VS



Straightness = less BIC

straumann


NITIUM
TECHNOLOGY

Full clinical trials

UNIVERSITI TEKNOLOGI MARA

Participants Needed for Research Study on Dental Implants

Do you have a missing molar between your lower back teeth? You may be eligible for a ONE-year study that could replace your missing tooth.

You May Qualify If You

- Are above 18 years old
- Are in good health with no medical illness
- Have not been smoking/smoked for the past six months
- Are not pregnant or breastfeeding

Potential Benefits

Participating in this study may replace your missing tooth with a dental implant to improve your oral health

Participation Involves

Several visits which include consultation, dental implant placement, restoration with an implant crown, and recalls

SCAN TO REGISTER

https://forms.gle/C7fY4cHNPvGnMLH69

We only require 105 participants.Register now to grab your chance. For more information please contact or whatapps us at 011-59898953

Faculty of Dentistry,UiTM Sungai Buloh Campus, Jalan Hospital, 47000, Sungai Buloh , Selangor

Awards and Recognition

Second place
at Asian Entrepreneurships Award (AEA) 2020, Japan

MedTech Innovator's top 20 Asia Pacific Startups
at MedTech Innovator APAC 2021, Los Angeles/Singapore

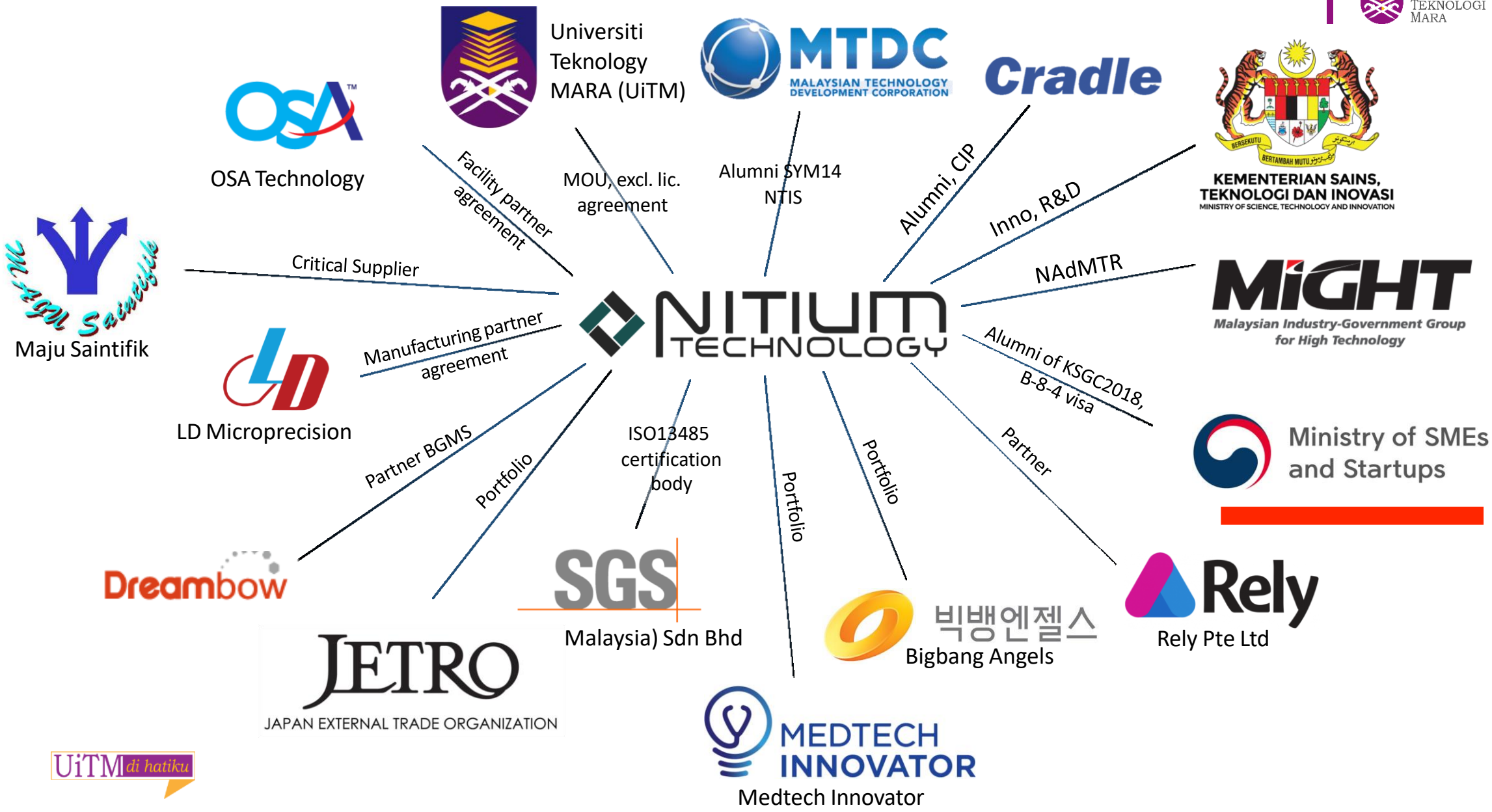
World's Top 40 startup
at K-Startup Grand Challenge 2018 by Ministry of SMEs & Startup, Korea South Korea

Special Award at Internationale Fachmesse Ideen, Erfindungen & Neuheiten 2017 (IENA2017), Germany

Gold Medal Award at International Invention, Innovation & Technology 2017 (ITEX2017), Malaysia

Gold Medal and Special Award
at International Conference & Exposition On Inventions by Institution of Higher Learning 2017 and 2019, Malaysia

Company background – Collaboration and network



Company background – Team and ISO13485 certificate

Founders

Asif Khushaini, M.Sc
CEO cum ISO 13485 QMR
Responsible in developing maintaining all SOPs of the Nitium's operation

Zul Iman Yusuf, B.B.A
COO
Was project leader during pre-clinical. An executor, responsible in maintaining Nitium's operation

Angel

Dato Ir. Noor Azmi Jaafar,
Chairman / Advisor
Former co-founder of multimillion dollar manufacturing company with more than 30 years experience in industry.

Engineer

Saiful Islam Izra'ai, M.Sc
CTO
His master research was on dental implant design. Also assist the QMR in implementing ISO13485 QMS

Experts

Prof. Dr. Rohana Ahmad, PhD
Technical Director
A dentist and renowned scientist in prosthodontist. GCP certified.

Asc. Prof. Hussain Ismail, PhD
Technical Director
Prominent scientist in Powder Metallurgy and porous alloy.

UiTM di hatiku

SGS

Certificate MY20/1811030372

The management system of

Nitium Technology Sdn. Bhd.

B-1-16, Vista Alam, Jalan Ikhtisas 14/1, Seksyen 14
40000 Shah Alam, Selangor
MALAYSIA

has been assessed and certified as meeting the requirements of

ISO 13485:2016

For the following activities

Design, Development, Manufacture and Distribution of Sterile Alloy Dental Implant System and Blood Glucose Monitoring System (Blood Glucose Strips and Blood Glucose Meter)

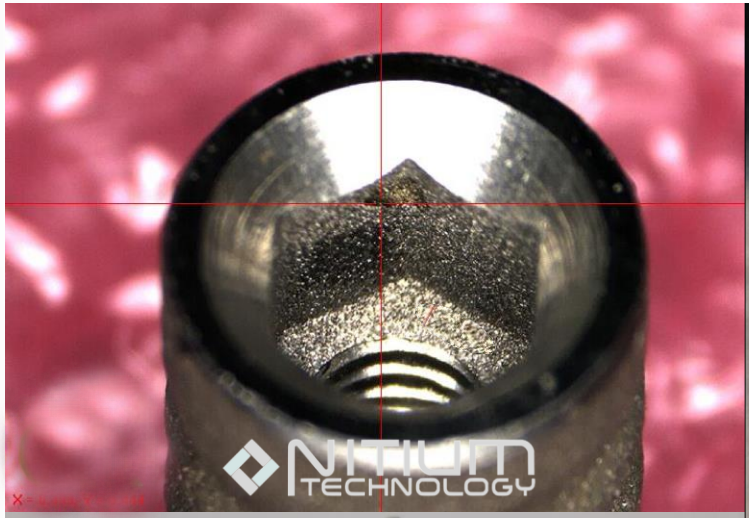
This certificate is valid from 03 June 2020 until 02 June 2023
Issue 1. Certified since 03 June 2020

Authorised by

SYSTEM CERTIFICATION ISO 13485 SGS

Medical Device AUTHORITY MALAYSIA

Surgical Instruments



NITIDENT

TUAH DENTAL IMPLANT SYSTEM

First Visit to GAIA , 4 Nov 2019

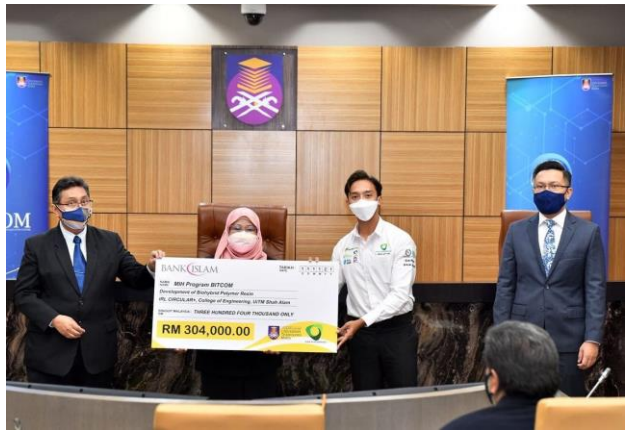
Intern cum FYP @ GAIA , July 2020 – Aug 2021

Meeting with UiTM VC, 17 April 2020

MoU Signing, 13 May 2020

Licensing Agreement Signing, 28 May 2020

R&D Project Team Discussion on Bio-hybrid Project , 24 Jan 2020



MoA Signing , 13 Nov 2021

GAIA PLAS BERHAD

UNIVERSITI TEKNOLOGI MARA

GAIA GREENTECH SDN BHD

https://www.youtube.com/watch?v=8TPg584Pjjo

Malaysian 3D printing and design communities are coming together to produce face shields for frontliners facing the Covid-19 pandemic.

HOME / MALAYSIA

With face shields in short supply, Malaysians bring 3D printers into Covid-19 fight

Monday, 23 Mar 2020 06:53 PM MYT
BY IDA LIM

Malaysian volunteers have come together to use 3D printers and other methods to make much-needed face shields for medical personnel. — Picture via Facebook/Husni Faiz /3D Printing Malaysia Community for Covid-19 Group

KUALA LUMPUR, March 23 — Volunteers in Malaysia have come together as a community to crowdsource the use of 3D printers and other methods to make much-needed face shields for those fighting the spread of Covid-19, to help meet demand for the single-use disposable personal protective equipment (PPE).

Facebook user Nurfaiz Foat had on March 21 posted his idea to mobilise Malaysians to use 3D printers to print the plastic face shield holders and simple readily-available materials to make face shields for distribution to frontliners, using a design — adapted from Josef Prusa's original design — which he said takes 40 minutes to print for each plastic holder.

IN MALAYSIA

JUST IN POPULAR

KTMB urges No 9173 ETS train passengers with Covid-19 sym to get screened

Sarawak has ordered PPE for hospitals battling Covid-19, sa minister

Nestle Malaysia reports one C positive case

PM thanks cops in special Pol message (VIDEO)

Covid-19: Malaysian 3D printing enthusiasts produce face shields to aid frontliners in fight against pandemic

FACEBOOK

Monday, 23 Mar 2020
7:10 PM MYT

By Qishin Tariq

Face shields for those fighting the Covid-19 pandemic are in short supply, prompting the Malaysian 3D printing and design communities to make DIY ones for frontliners. — AFP

Malaysian 3D printing and design communities are coming together to produce face shields for frontliners facing the Covid-19 pandemic.

MinNature Malaysia founder Wan Cheng Huat, who started the Facebook group 3D Printing Malaysia Community for Covid-19, said the self-funded group aimed to help frontliners by creating face shields using 3D printing, laser cutting or DIY builds.

On the FB group's page, he noted that this production method had some limitations including cleanliness during fabrication and sterilisation after.

He said most makers did not have controlled environment settings, so all visors made would have to be sent to a centralised collection point where it would be disinfected using ultraviolet (UVC) light.

Recommended Reading

WORLD
New Jersey slaps terror charge on man over alleged supermarket cough threat

ATHLETICS
Coe suggests world athletics championships could slip to 2022

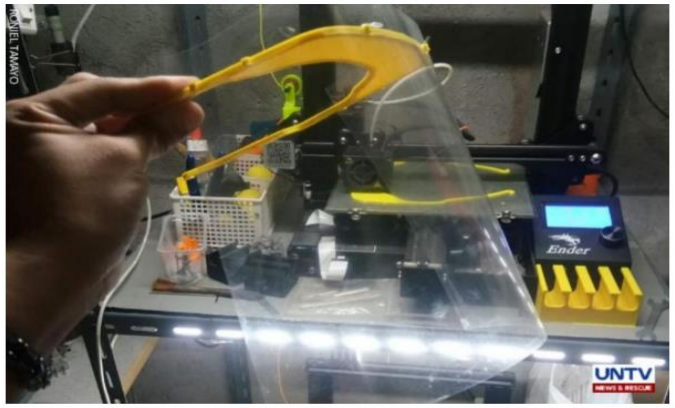
BOXING
Fury-Wilder rematch to be pushed back due to coronavirus

OTHER SPORTS
Interview: Surfing chief says Games will be most relevant ever, after 'rogue wave'

CORPORATE NEWS
Singapore to shut bars, limit gatherings to counter coronavirus spread

Volunteers donate 3D- printed face shields for frontliners

UNTV Aileen Cerrudo
UNTV News 24 March 2020



MANILA, Philippines — There is an apparent shortage of personal protective equipment (PPE) supply in the country amid its deadly battle with COVID-19.

Some private hospitals have resorted to using old linen as improvised masks due to the supply deficit.

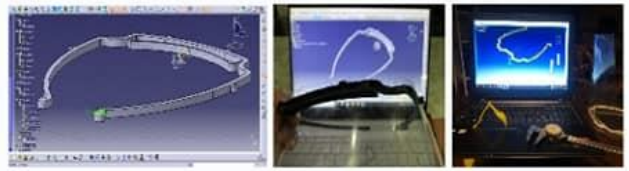
And like an unexpected twist in a movie, a group of individuals banded together to help the country's frontliners by providing PPEs through 3D printing.

CNC of Injection Mold,
March 26 (Completed in 3 days)

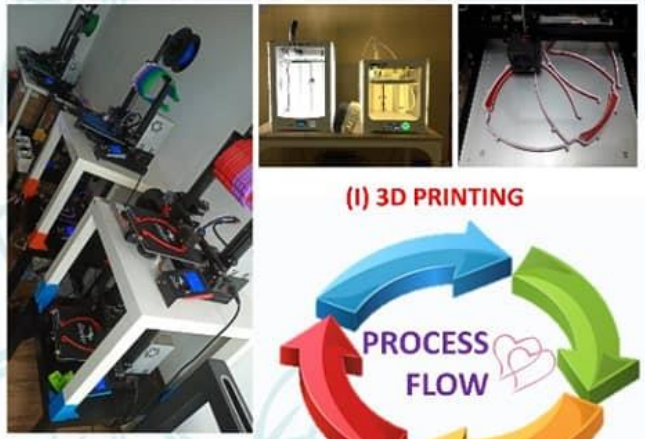
Ideation & Execution (March, 26)

Mould modification (March, 27 - 29)

First mass production (March 30)



(A) DESIGN HOUZ



(I) 3D PRINTING

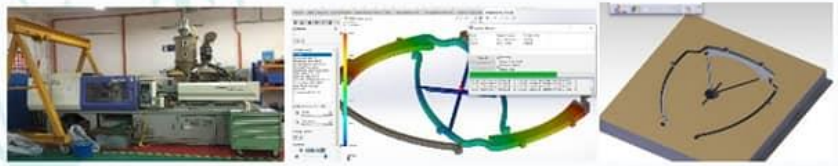
(II) COLLECTION

(III) DISINFECTION

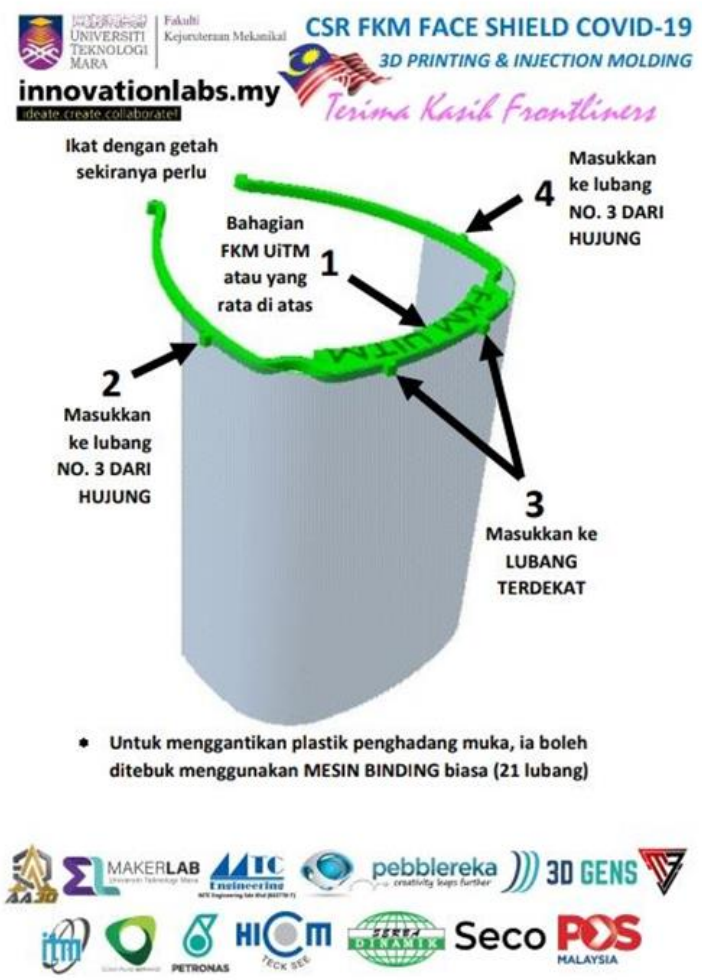
(IV) DELIVERY

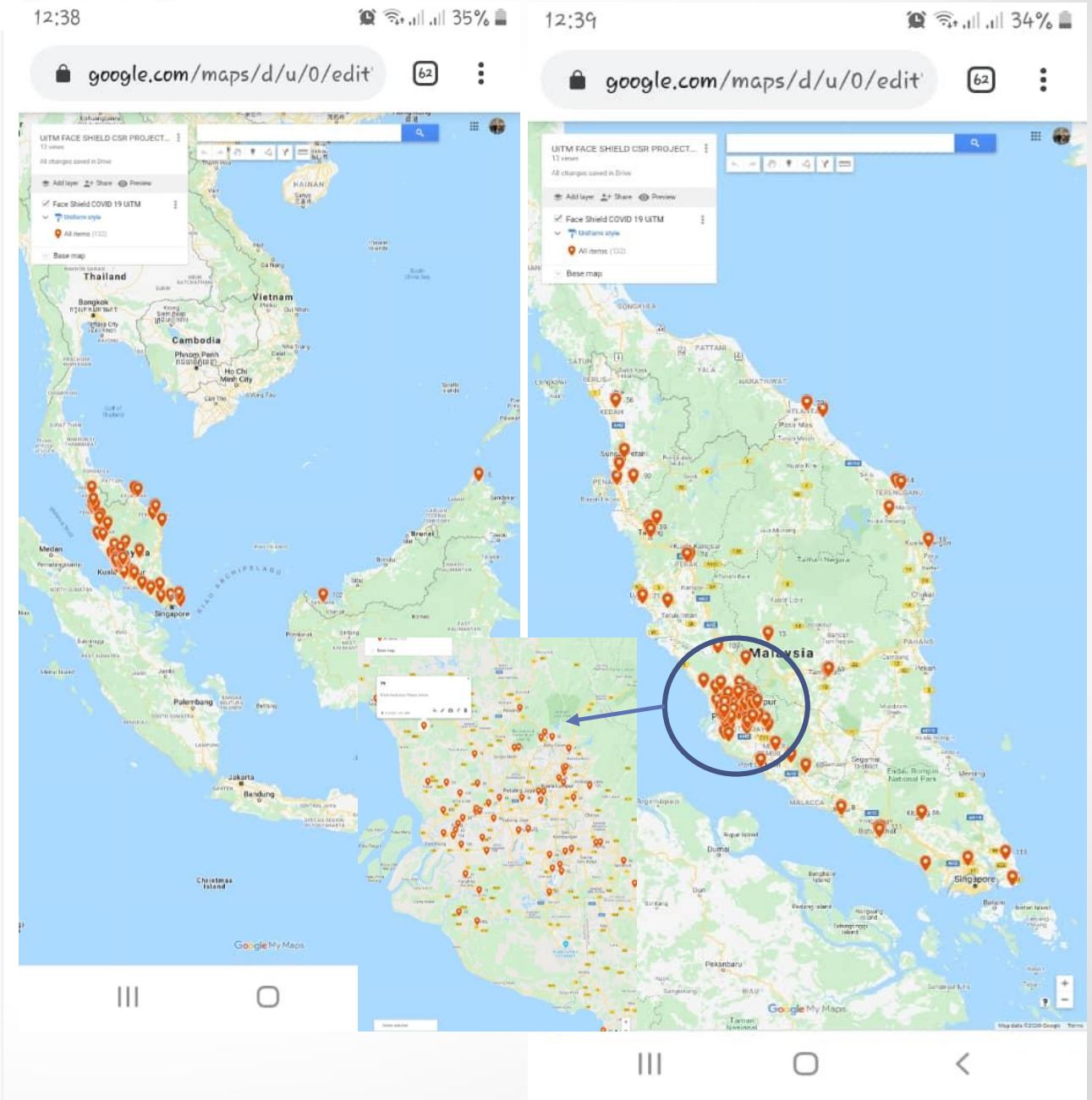
UVGI

(B) PLAN FOR INJECTION MOLDING

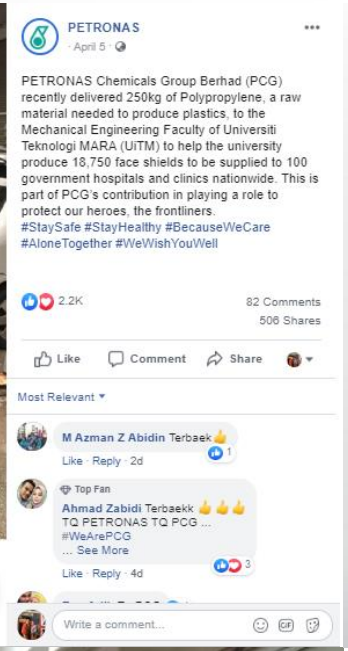


Delivery Locations





Leveraging Collaboration... creating more values



Face Shields Donation to Schools

Pejabat Timbalan Naib Canselor
(Penyelidikan dan Inovasi)
Office of Deputy Vice-Chancellor
(Research and Innovation)

Universiti Teknologi MARA
Aras 3, Bangunan Wawasan
40450 Shah Alam, Selangor, MALAYSIA
Tel: (+603) 5544 2004 / 2255
Faks: (+603) 5544 2020

Rujukan kami : 600-BITCOM (IP. 5/2/6/3/CP)
Tarikh : 18 Mei 2020

DR. HELMI BIN RASHID
Fakulti Kejuruteraan Mekanikal
Universiti Teknologi Mara
40450, Shah Alam
SELANGOR

Y.Bhg. Profesor/Tuan/Puan,

PERMOHONAN PERLINDUNGAN HARTA INTELEK

Dengan segala hormatnya perkara di atas adalah seperti berikut.

2. Sukacita dimaklumkan bahawa pihak Business Innovation & Technology Commercialization Centre (BITCOM) telah menerima permohonan perlindungan Harta Intelek Y.Bhg. Profesor/tuan/puan yang bertajuk **Personal Protective Face Shield Using Plastic Injection Molding And Film Piercing** .

3. Sehubungan dengan itu, pihak BITCOM telah meluluskan permohonan perlindungan harta intelek pihak Y.Bhg. Profesor/tuan/puan seperti yang berikut:

a) Perlindungan Harta Intelek di bawah kategori: **Hakcipta (Copyright)**

4. Sebarang maklumat terkini perihal pendaftaran Harta Intelek tersebut di Pendaftaran Harta Intelek Malaysia (MyIPO) akan dimaklumkan kelak.

5. Kerjasama daripada pihak Y.Bhg. Profesor/tuan/puan dalam perkara ini adalah amat dihargai dan didahului dengan ucapan terima kasih. Sebarang maklumat lanjut, sila hubungi sekretariat Harta Intelek UiTM di talian 03-5543 7976 / 03-5544 2748 atau email kepada bitcom@uitm.edu.my / ipribuuitm@gmail.com.

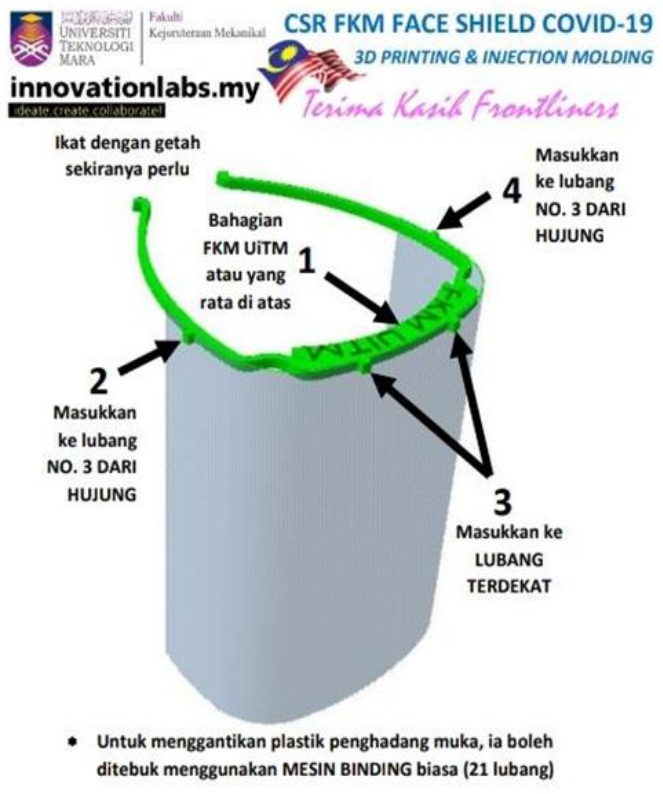
Sekian

Yang benar,

FARIZAH MOHAMED ISA
Koordinator Harta Intelek

sk :
1. Mohd Alif Bin Jalaluddin
2. Mohd Helmi Bin Mohd Mustamil
3. Mohamad Suhairi Bin Zainudin
4. Mohd Azerif Bin Md Ali
5. Muhammad Hussain Bin Ismail
6. Zuraidah Bt Salleh
7. Zulkifli Bin Mohamed
8. Abdul Halim Bin Abdullah
9. Ameran Bin Saiman
10. Nurul Syuhadah Binti Khusaini
11. Mohamad Tolha Bin Subhi
12. Radzuan B A Rahman
13. Mohamad Firhan Bin Morni
14. Mohd Helmi Bin Omar
15. Arzuan Bin Kasim
16. Shaiful Amri Bin Ramli
17. Khairul Hazwan Bin Abdul Hadi
18. Ahmad Faiz Bin Nawawi
19. Amalina Binti Amir
20. Shahidan Bin Mohamad
21. Aminuddin Bin Zulkifli

Ahli Projek



IP: Copyright

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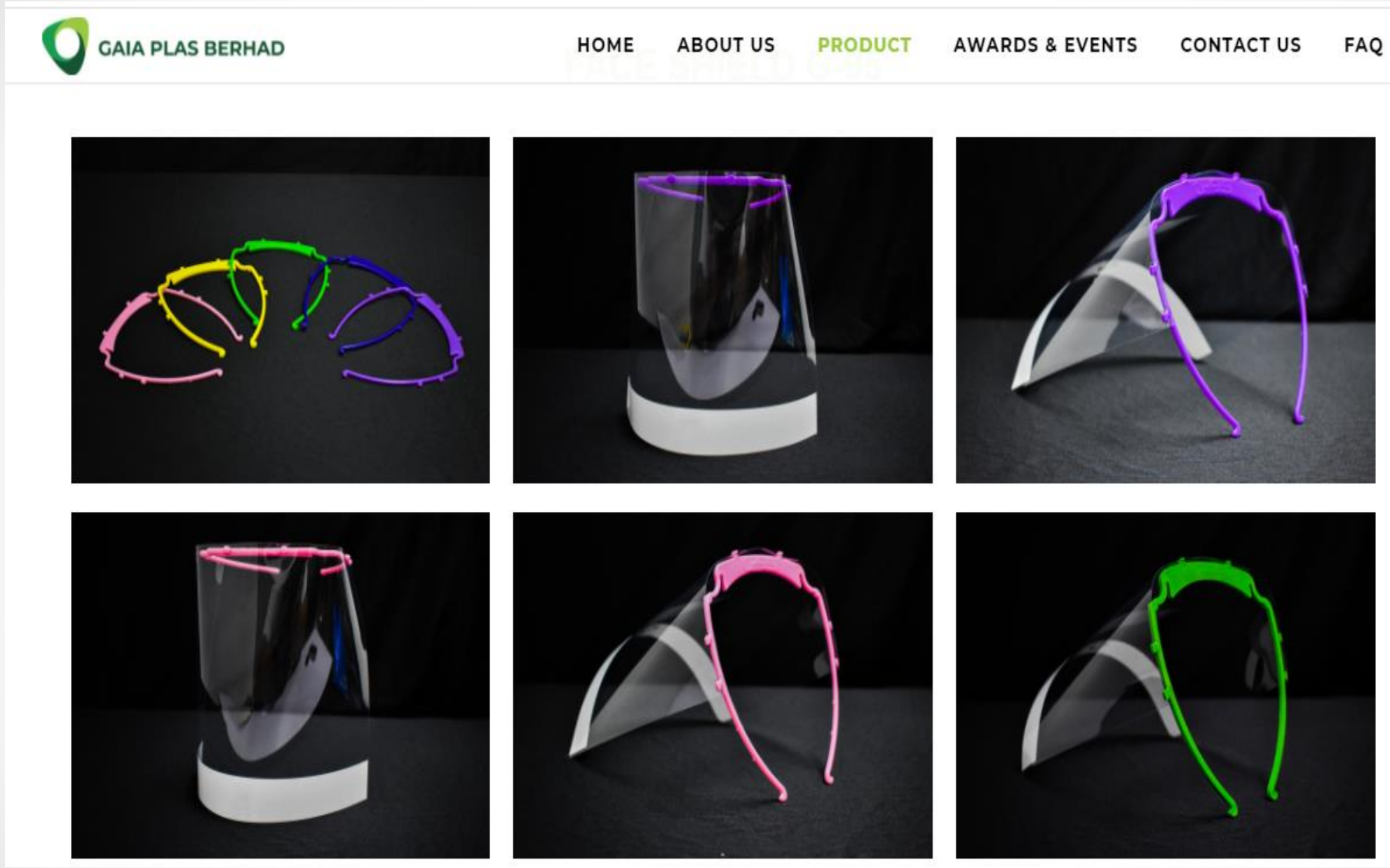
innovationlabs.my
ideate.create.collaborate!

UiTM FaceShield

…from CSR to Commercialization

Produced more than 40,000 pieces within 3 months during the 1st MCO in 2020



https://gaiaplas.com/face-shield-g-95/

50 people, picked from a pool of volunteers, work on an assembly line to measure and cut the various components required before assembling the final product. Up to 3,000 units can be produced in a single day, and the Company is expected to take approximately 20 days to produce the 60,000 units it has committed to deliver.

A joint effort with PROTON's partners

While PROTON is responsible for the assembly and distribution of its face shields, the Company has received contributions from its vendor community who are eager to get involved. One such contributor is Pos Logistics Sdn Bhd, one of the biggest logistics service providers in Malaysia. They contributed over 2,000 large carton boxes that will be used to pack the face shields and make it easier to transport them.

Automotive component supplier, HICOM-Teck See Manufacturing Malaysia Sdn Bhd, is another vendor supporting this initiative. They have contributed 1500kg of polypropylene, one of the main components in a car bumper, which will be used to produce the frame of the face shields.

The original design for the face shield was contributed by Universiti Teknologi MARA (UITM). The designers at PROTON Design then developed the frame based on feedback from end users and also added the slogan *STAY STRONG! We will get through this!*


SUMBANGAN KEPADA NEGARA

Pekerja Proton ganding bahu hasilkan pelindung muka secara sukarela

Projek ini juga satu daripada tanggungjawab syarikat kepada negara. Kami harap ia dapat digunakan oleh petugas dalam mengekang penularan Covid-19

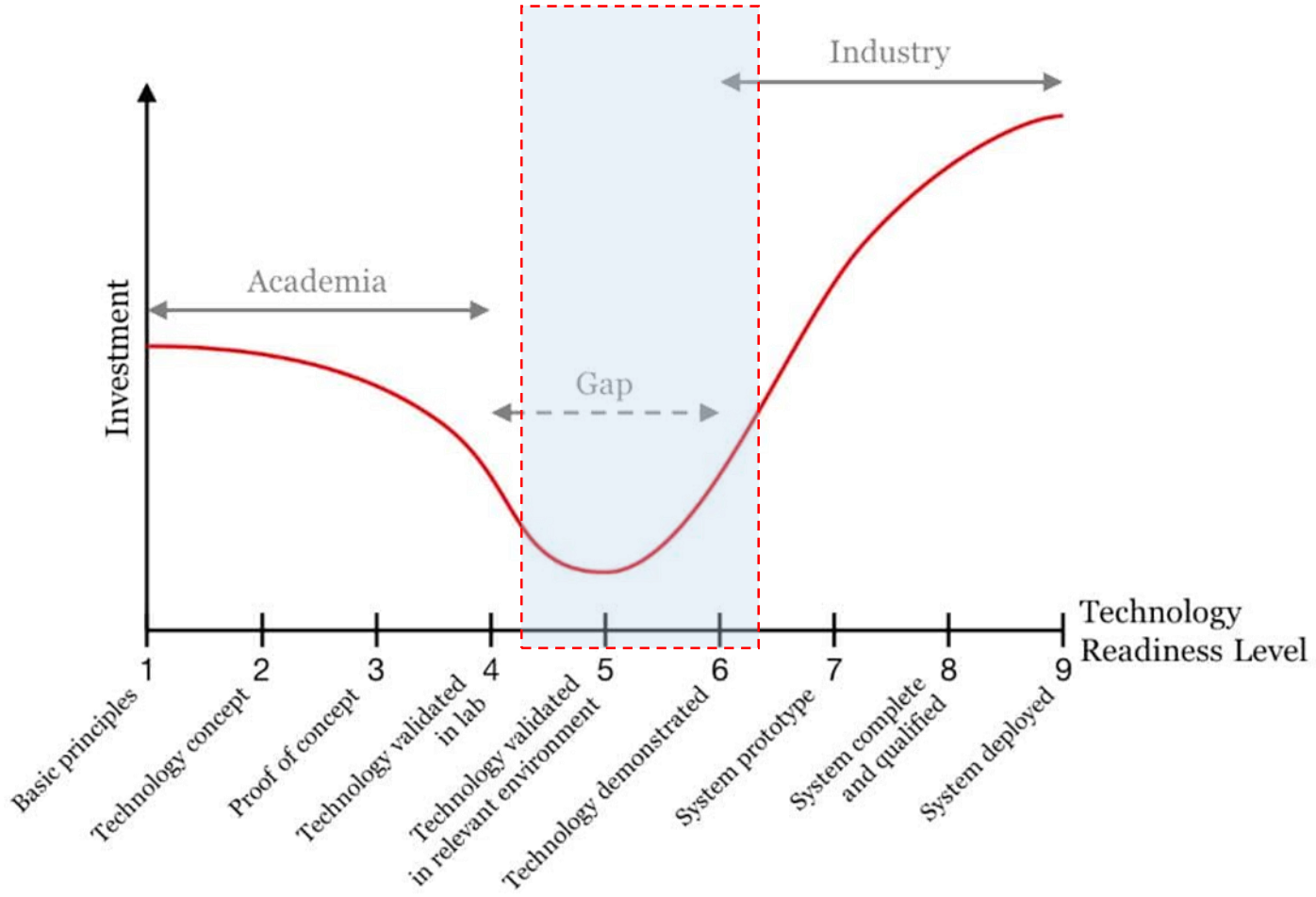
LEE

ponse received both internally and outside of the company to our face shield
unteering their services was overwhelming, despite inherent risks involved in
. Therefore, we have taken steps to ensure everybody is kept safe by providing

"We are not competing…we are complementing"

sharing some ideas and insights to PROTON

Five actions for academia and industry to co-create innovation



Alessandro Rossini

1. Academia and industry should better understand each other's culture
2. Academics should better understand real-world industrial challenges
3. Practitioners should stay up-to-date with the state-of-the-art
4. Industry should hire more PhDs
5. Academia and industry should conduct more joint research projects

https://www.pwc.no/en/bridging-the-technological-valley-of-death.html

KEMENTERIAN PENGAJIAN TINGGI

JPT | JABATAN PENDIDIKAN TINGGI

UNIVERSITI TEKNOLOGI MARA

MyLAB

2022

TRL5 → TRL8/9

Max RM3 million (2 years)

Industrial collaborator

3D GENS

NITIUM TECHNOLOGY

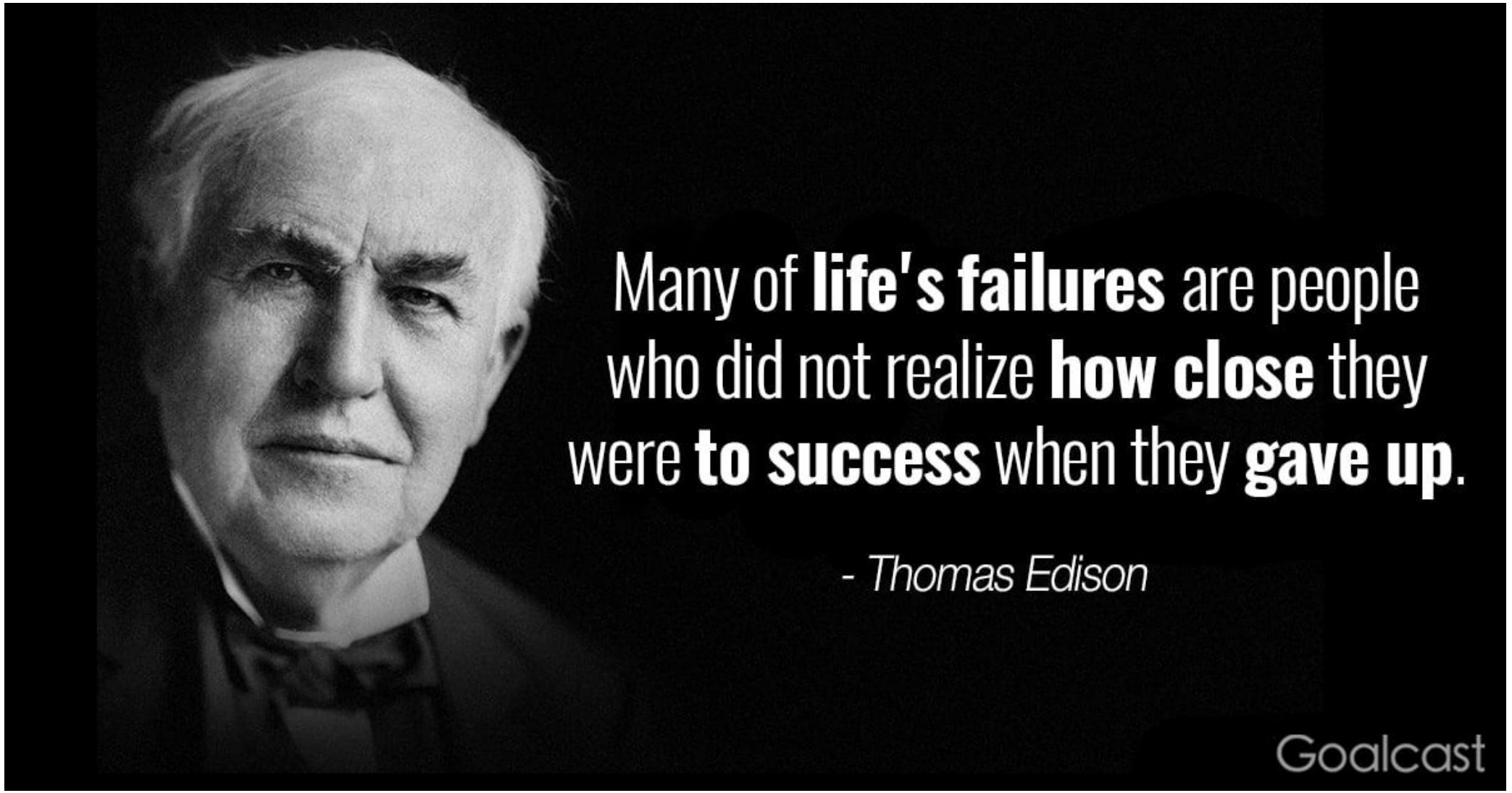
MH DELIMA SDN BHD
One Stop Solution for Educational Sector

UiTM di hatiku

Final Remarks

- Creative mindset → important tools in Innovation → leads to new products and processes that sustain our economy
- It is vital for everyone to have knowledge about IP! Know your rights and Protect your IP!
- Some basic ideas of innovation → thinking out of the box !

https://youtu.be/KNbAUwuFJ9k


Many of life's failures are people who did not realize how close they were to success when they gave up.
- Thomas Edison
Goalcast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YOU
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