## 

beyond the citations: to unleash the research novelty using video



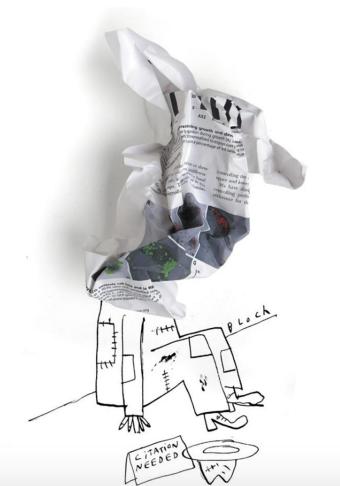


NEWS FEATURE · 13 DECEMBER 2017

## The science that's never been cited

Nature investigates how many papers really end up without a single citation.

**Richard Van Noorden** 

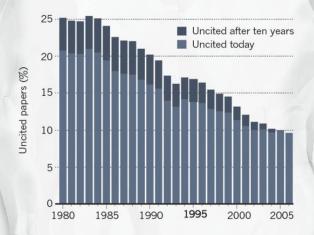


## **UNCITED SCIENCE**

Data from the Web of Science give an incomplete picture of how much science is never cited: many papers it records as having no citations have actually been cited somewhere.

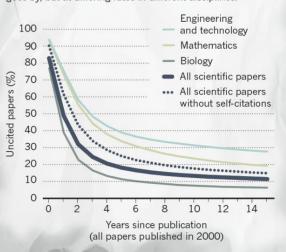
## Downward trend

The share of scientific articles recorded as 'uncited' in each year is falling.



## Disciplinary differences

The share of uncited papers from any year falls as time goes by, but at differing rates in different disciplines.



onature



## Unleash research novelty using video



## The challenges of making video

- Do yourself > investment of new skills (script-writing/video making/animation)
- 2. Outsource > someone understand your work
- 3. Define your targeted audience > expert audience vs public audience
- 4. Understand the concept of teaser videos
- Engage the audience with omni-channel experience > "branding" or Impact Profile

## The art of engagement:

multidisciplinary to transdisciplinary





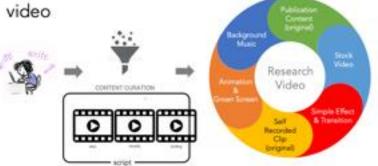
## Let see what

a video can do



Stock video clip versus original video clip

## The making of research video

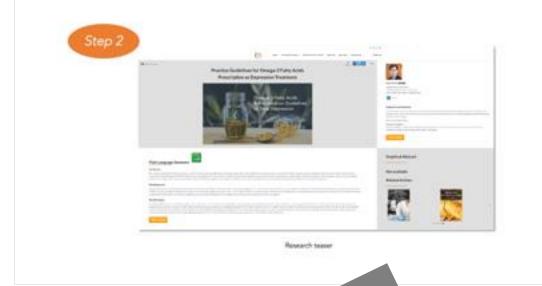






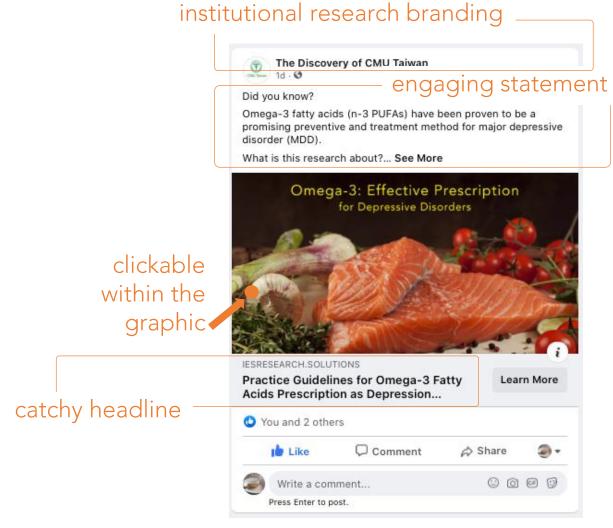






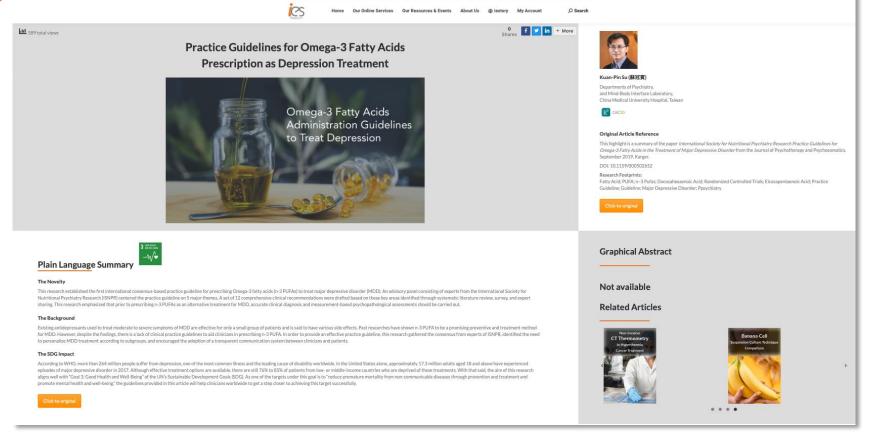






Facebook posting

## Step 2



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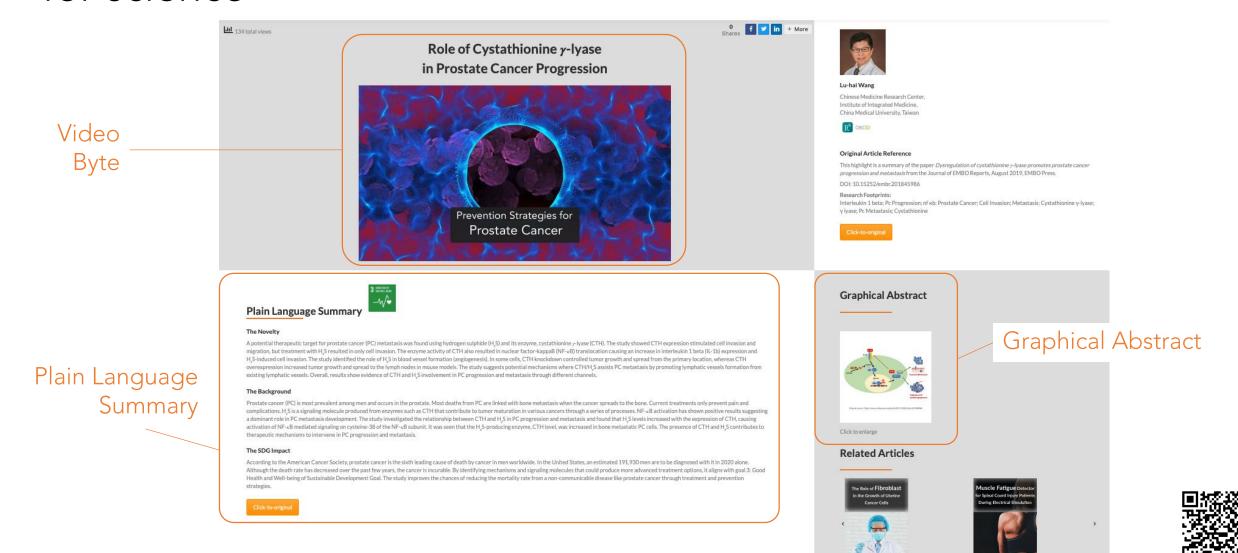


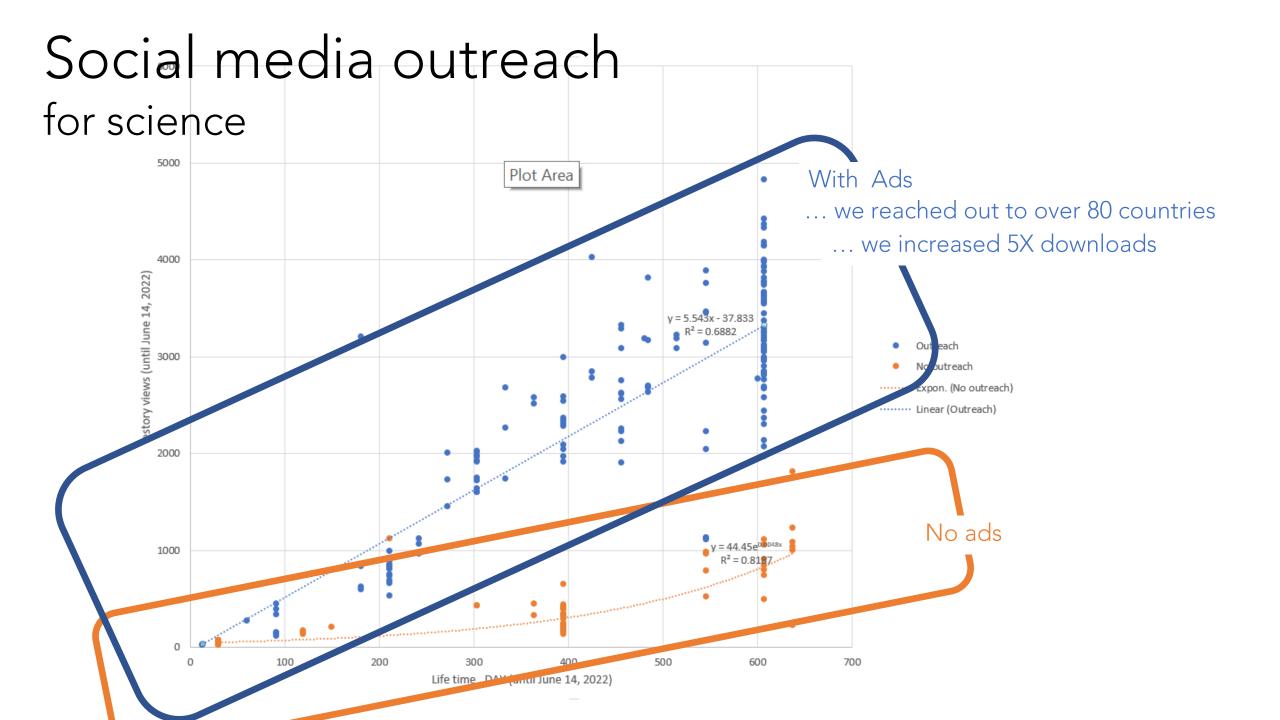


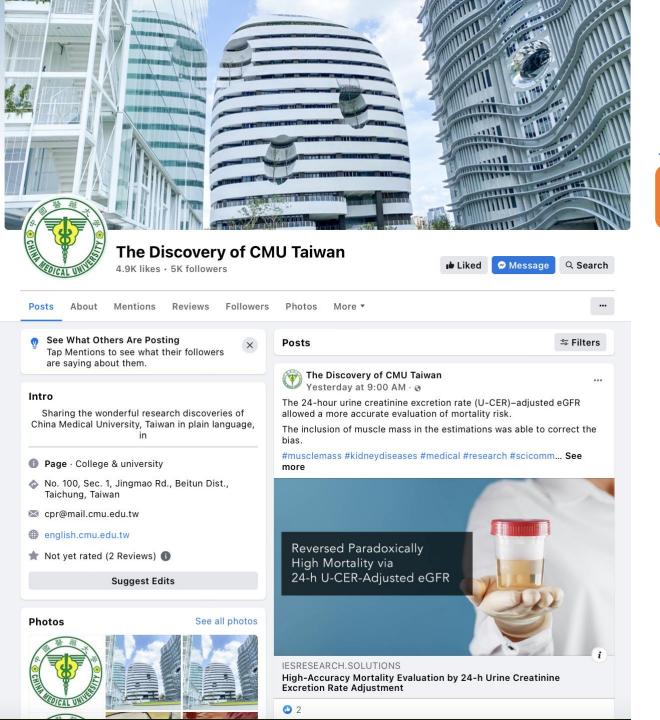
Full-text, if it is Open Access

## Social media outreach

## for science



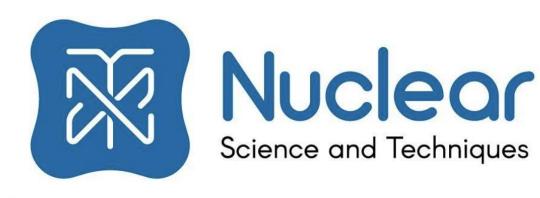


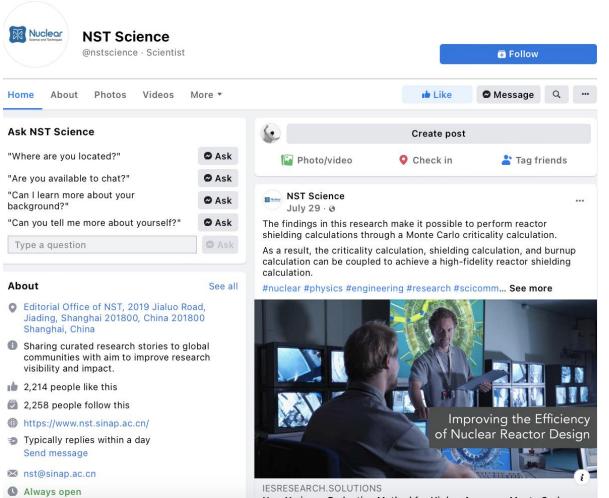


https://www.facebook.com/researchcmu/

PLEASE CLICK THROUGH THE ACCOUNT TO EXPERIENCE THE BITE-SIZED CONTENT TO FULL-TEXT

- China Medical University is one of the top private universities in Taichung City, Taiwan. It is ranked #51-100 in QS WUR Ranking By Subject 2022 (more info)
- The Facebook account was built from scratch with zero followers in two years ago focusing 100% on research activities. Now it has 5K followers of research communities including their collaborators



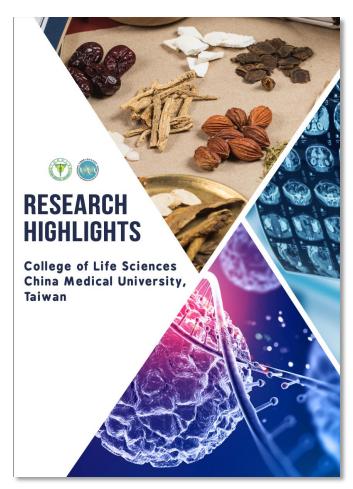


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- Nuclear Science and Techniques (NST)
  reports scientific findings, technical
  advances and important results in the
  fields of nuclear science and techniques.
  It is a top Chinese journal associated with
  Springer (more info)
- The Facebook account was designed to reach out to wider research audience outside China seeking for more publication and collaboration

## Universities' Impact Stories



Research Highlights of College of Social Sciences, National Taiwan University



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Influence of polar substituents and flexible chain length on mesomorphism in non-mesogenic linear hydrogen bonded complexes



Poornima Bhagavath<sup>a</sup>, S. Mahabaleshwara<sup>a</sup>, Sangeetha G. Bhat<sup>a</sup>, D.M. Potukuchi<sup>b</sup>, Prakasha Shetty<sup>a</sup>, Srinivasulu Maddasani<sup>a,\*</sup>

Department of Chemistry, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal 576-104, India
Department of Physics, University College of Engineering, Jawaharlal Nehru Technological University: Kakinada, Kakinada 533-003, India

## ARTICLE INFO

Article history: Received 8 December 2020 Revised 25 March 2021 Accepted 25 April 2021 Available online 28 April 2021

Keywords: Hydrogen bonding Induced mesomorphis Linear HB complexes Pyridyl units Smectic phases Dihalobenzoic acids Polar substituents

## ABSTRACT

Jujud Crystalline (LC) behavior is observed in the mixtures of few molecular weight dihalohenzoic acids viz., 2.4 clicitorobenzoic acids and 4-chiero-2-fluorobenzoic acids that the Schiff's base pyridy units, viz. (4-pyridyl-)benzylidene-4-n-allyl anilines (heptyl, decyl, dodecyl, tetradecyl and hexadecyl homologues, PpBnA) in 1:1 M ratio. The dihalobenzoic acids and the pyridyl molecties are non-mesogenic, but their equimolar (1:1) mixtures exhibit liquid crystalline behavior through intermolecular hydrogen bonding (HB, which is characterized by the infrared spectrosopy. The dihalobenzoic acids are the proton donors, while the pyridyl units are proton acceptors and are found to undergo self-assembly. The dihalobenzoic acid HB complexes are found to exhibit higher liquid crystallinity than the corresponding mono halo substituted benzoic acid HB complexes with the same pyridyl units. The 4-clinor2-fluorobenzoic acid HB complexes exhibit large mesomorphic state than the 2-d-dichrobenzoic acid HB complexes with the 2-d-dichrobenzoic acid HB complexes with the same pyridyl units. The 4-clinor3-fluorobenzoic acid HB complexes with the same pyridyl units. The 4-clinor3-fluorobenzoic acid HB complexes with the same pyridyl units. The 4-clinor3-fluorobenzoic acid HB complexes with the same pyridyl units. The 4-clinor3-fluorobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes with the same pyridyl units. The 4-dischrobenzoic acid HB complexes wi

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## 1. Introduction

The supramolecular structures formed with two different functional groups are termed as hetero synthons while with two similar functional groups are called as homo synthons. The synthons are reported to undergo synonaneous self-assembly and their capability is often addressed in terms of the hydrogen bond (HB) interactions between the functional groups. The research on liquid crystals (LC) formed through the HB gained a momentum in last two decades due to the underlying ease in achieving device savey properties. In this direction, it involves economical production of materials with simple and green chemical synthetic processes. Kato et. al., realized [1.2] the liquid crystalinity (or mesomorphism) due to the HB interactions solely between various chemical moieties. It is reported that the stabilization of mesomorphism in these systems is mainly due to the imparted rigidity (rigid like) to the molecular frame through the soft non-covalent HB interac-

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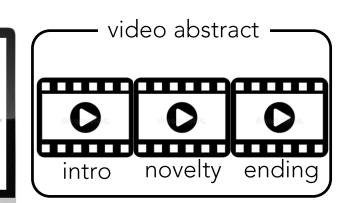
tions. Furthermore, it is well established that the thermal stability of the mesomorphs is influenced by the factors like dipole-dipole interactions, London dispersion forces, dipole-induced dipole interactions, polarity and polarizability of the different moieties. The HB interactions between the selective compounds viz., pyridine derivative and a carboxylic acid (hetero synthon type), carboxylic acid and another carboxylic acid (homo synthon type), amide derivative and carboxylic acid (hetero synthon type) etc. gives rise an interesting phenomenon, such as the occurrence of twist bend nematic phase [3], wide range of blue phases [4.5]. new smectic ordering [6], low melting and clearing temperatures [7], mesophase stabilization [8] etc. The chiral dopants in the HBLC systems are reported to provide the variety of chiral mesophases [9] with ferroelectric properties, desired for the device applications. The nanocomposites of the HBLC complexes are found [10 to enhance the electrical conductivity by about two orders of the magnitude. The systematic studies on influence of spacer moiety and flexible chains in complimentary double HB LCs formed using dicarboxylic acids revealed [11] the re-entrant nematic phase and the enhanced tilted smectic-C phase stability. The HB LCs formed between a pyridyl Schiff base with a bulky terminal polar

"A video is worth

## 1.8 million words!"



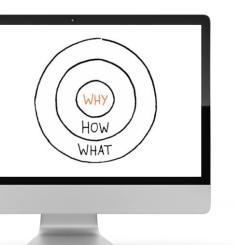
Full-text Video abstract



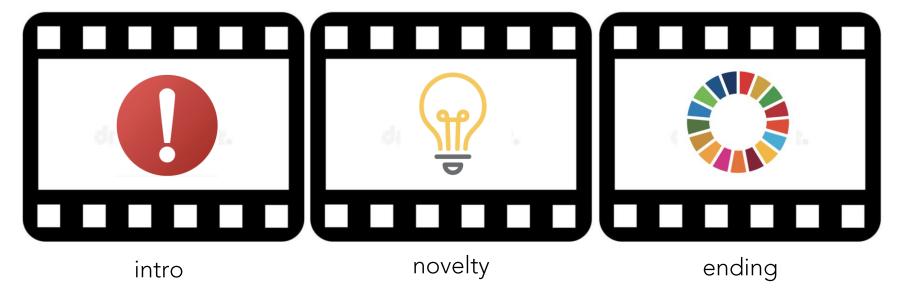
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reasons that you need a video

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  - > increase readers' confidence to cite
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- 2. Facilitates better understanding
- 6. Shelppeate and the comprehending the paper
- 7. Can use for fundraising
- 3. Widens the online accessibility
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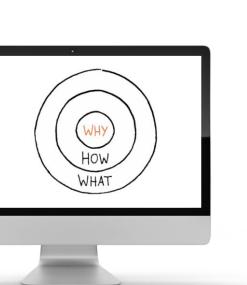


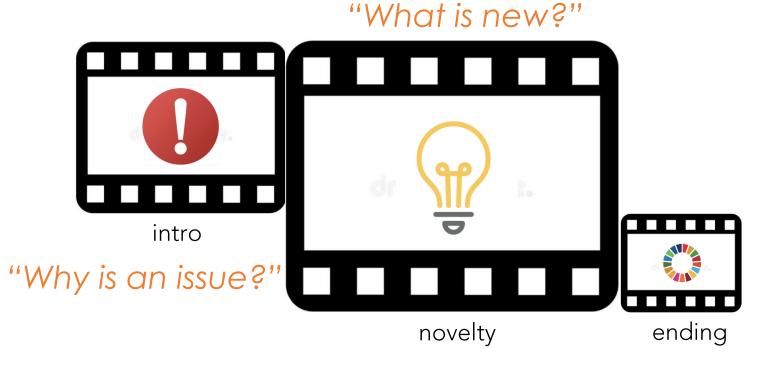
"What is new?"



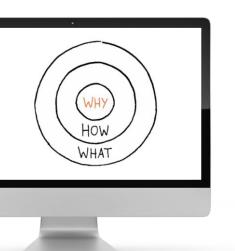
"Why is it an issue?"

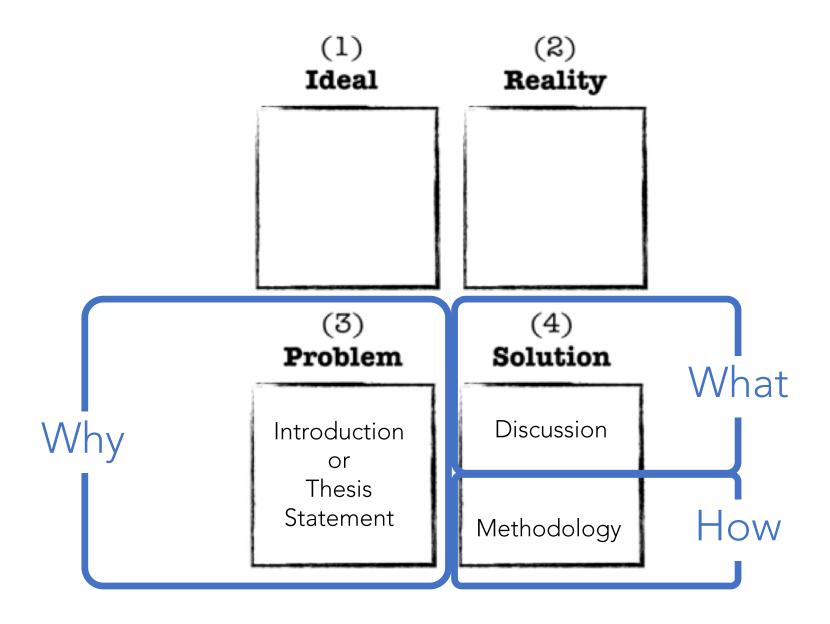
"Who will benefit?"



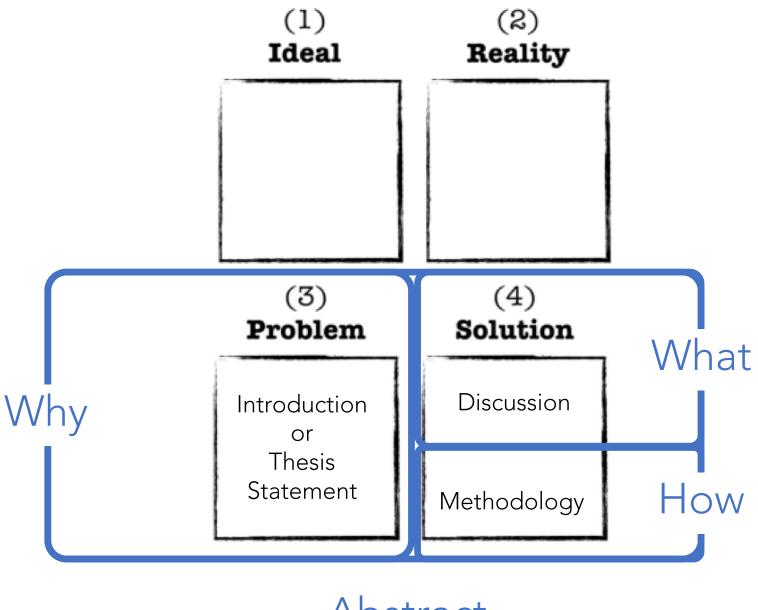


"Who will benefit?"



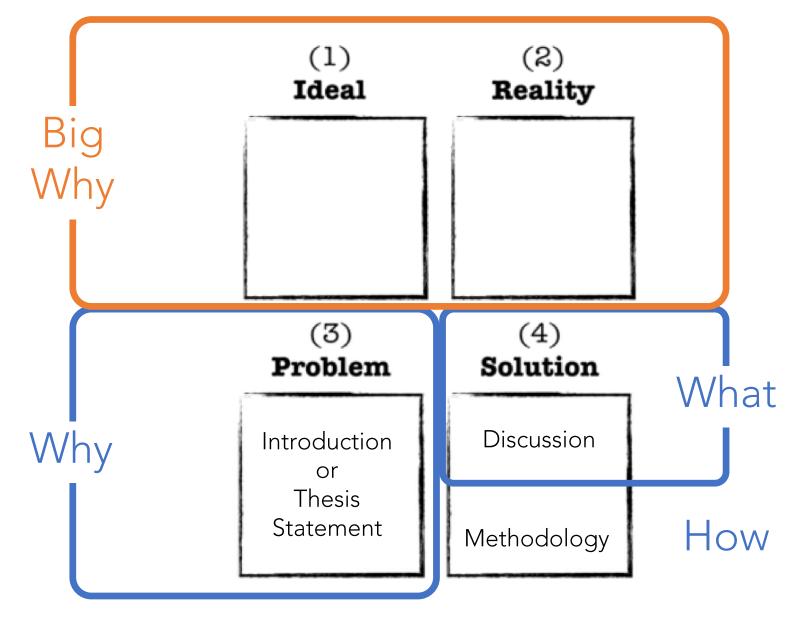






Abstract

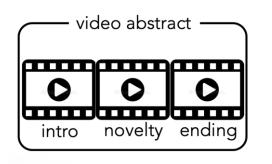




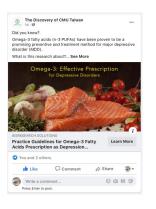
Plain Language Summary

- 1. Do yourself > investment of new skills (script-writing/video making/animation)
- 2. Outsource > someone understand your work
- 3. Define your targeted audience > expert audience vs public audience
- 4. Understand the concept of teaser videos
- 5. Engage the audience with omni-channel experience > "branding" or Impact Profile

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Research Teaser

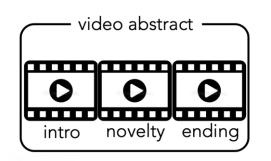
Video Teaser

Time saving

- 1. Do yourself > investment of new skills (script-writing/viomaking/animation)

  New Science
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3. Define your targeted audience > expert audience vs public audience



Time saving







Biology



Physics

Chemistry

Engineering

Research Teaser

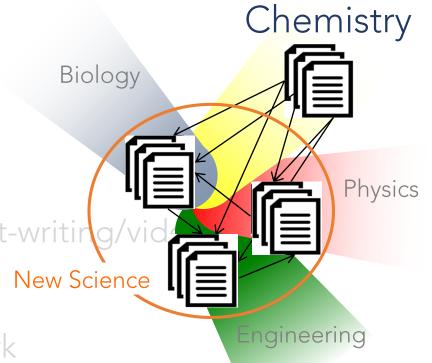
Video Teaser

Clickable Video

Storytelling

- 1. Do yourself > investment of new skills (script-writing/making/animation)

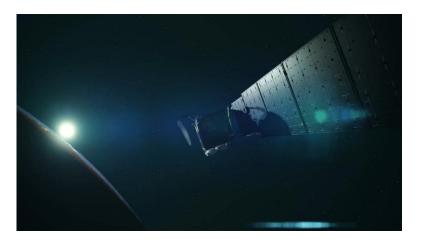
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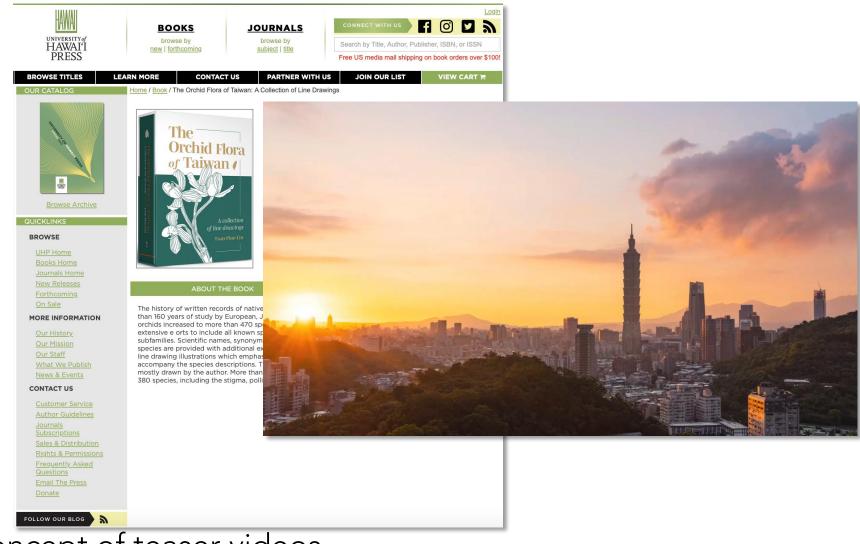


4. Understand the concept of teaser videos









4. Understand the concept of teaser videos



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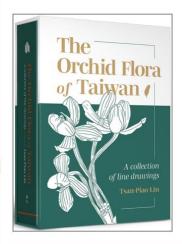
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ADDITIONAL INFORMATION

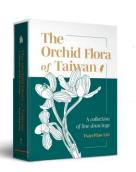
National Taiwan University Press

1032 pages

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ABOUT THE BOOK

The history of written records of native orchids in Taiwan began in 1857 with a British botanist. After more than 160 years of study by European, Japanese, and Taiwanese scholars and enthusiasts, the list of native orchids increased to more than 470 species, including natural hybrids and varieties. The author exerted extensive e orts to include all known species in this work and arranged them based on the order of subfamilies. Scientific names, synonyms, and relevant references are provided for each species. Many of the species are provided with additional explanations in the "note" section. The uniqueness of this book is the line drawing illustrations which emphasize the structure of the column. In total, 500 figures are presented to accompany the species descriptions. These extensive line drawings were accumulated since 1971 and were mostly drawn by the author. More than that, this book also presents the gynostemium structure of more than 380 species, including the stigma, pollinium, rostellum, and column, in high-resolution color plates.





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"Save earth,to bring worth, for the new birth"

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MORE

Ph.D. -Ecotoxicology- Department of Zoology, 1995-1999, Delhi University MSc.-Department of Chemistry, Kirori Mal College, 1992-1994, Delhi University BSc. - Botany, Zoology, Chemistry, Kirori Mal College, 1989-1992, Delhi University

Experience: 25 years of teaching and research experience in Environmental pollution, toxicological studies with special reference to air, water, soil and food and impact on ecosystem and public health; Environment Safety and Waste Management; Global Warming and Climate Change

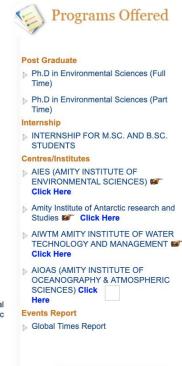
## **Publications. Presentations**

- -Publications in national and international refereed journals-33
- -Books edited and authored- 03
- -Several articles in newsletters and newspapers
- -Paper presentations nationally and internationally (USA, Netherlands, Germany, Singapore) Over
  - -Invited Lectures 36

## Conferences, Seminars, Trainings Organized

Conferences(national and international)- 08 Lectures/Symposiums/Seminars /FDP's - 12

Various environmental awareness events on environment, earth, water, ozone and environmental



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5. Engage the audience with omni-channel experience > "branding" or Impact Profile



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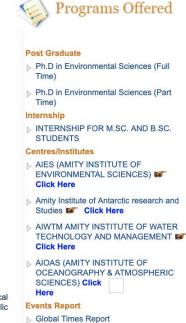
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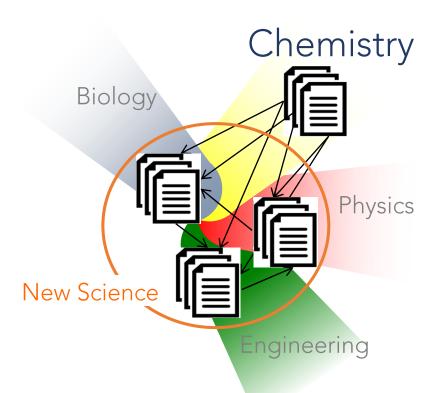
**INSURANCE** 

AND ACTUARIAL

SCIENCE

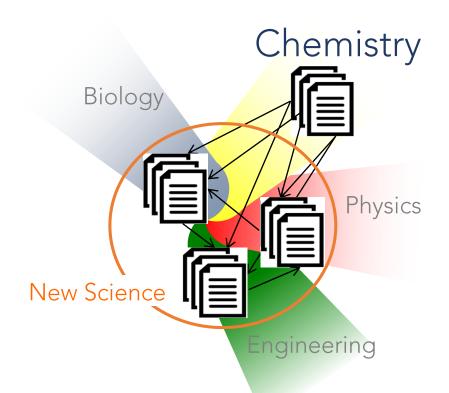
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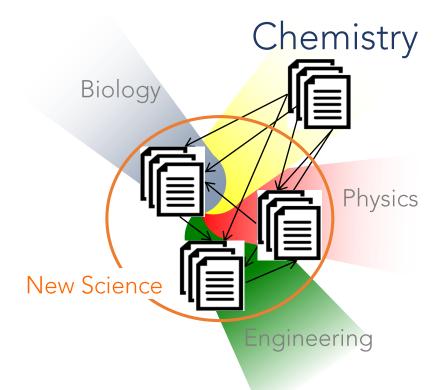






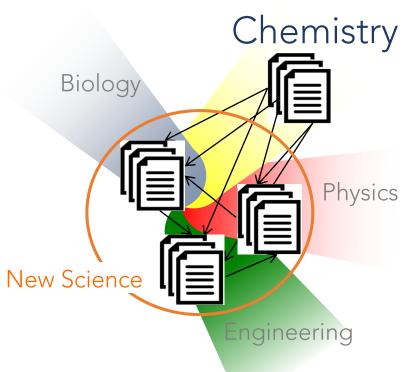




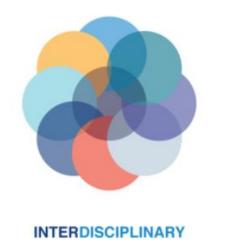




**TRANSDISCIPLINARY** 







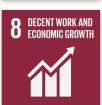






13 CLIMATE ACTION





















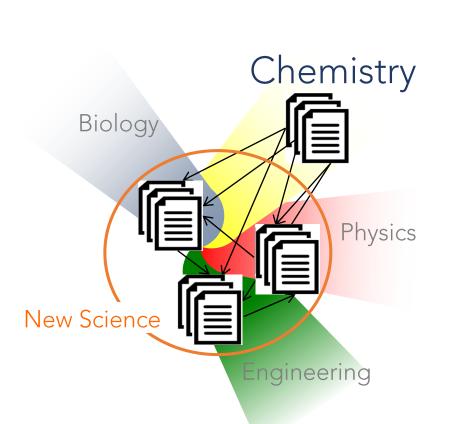




6 CLEAN WATER AND SANITATION



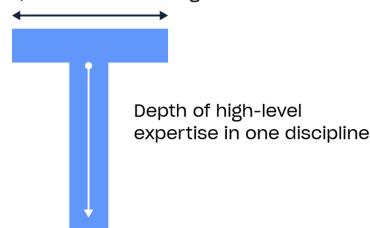






## T-Shaped Skills

Breadth of experience, knowledge & skills



## The Topical Clustering from Publications

15 publications from University Technology Petronas (UTP) that are coming from different departments and collaborated with different institutions are related to Environmental Protection from Plastic Pollution

## **UTP**

Civil & Environmental Engineering Department

Institute of Self-Sustainable Building

Fundamental and Applied Sciences Department

Chemical Engineering Department

Evaluation of optimum asphalt content and engineering properties of asphalt mixture containing irradiated waste plastic bottles granules as aggregates

Journal Article 8 Open Acce.

IOP Conference Series: Earth and Environmental Science, Volume: 1022, Issue: 1, Pages: 12033-12033. May 1, 2022 Authors: A Usman, M.H. Sutanto, M.Napiah, S.F. Zoorob, N.S.A.Yaro

Waste Polyethylene Terephthalate granules modified by gamma irradiation and their effect as fine aggregates on moisture damage of asphalt mixtures

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Perspective

JOP Conference Series: Earth and Environmental Science, Volume: 1022, Issue: 1, Pages: 12026-12026. May 1, 2022 Authors: A Usman, M.H. Sutanto, M.Napiah, A.M.Al-Sabacci, N.S.A. Yaro, J. Kumalasari, S.M.Saced

Effective use of recycled waste PET in cementitious grouts for developing sustainable semi-flexible pavement surfacing using artificial neural network (ANN)

Journal Article Journal of Cleaner Production, Volume: 340, Pages: 130840-130840, 2022

Authors: Muhammad Imran Khan , Muslich Hartadi Sutanto , Kaffayatullah Khan , Mudassir Iqbal , Madzlan Bin Napiah , Salah E Zoorob , Jiří Jaromír Klemeš , Awais Bokhari , Waqas Ratiq

Investigating Mechanical Properties of Interlocking Concrete Blocks by Recycling Waste Polyethylene Terephthalate - A Sustainable Approach

Conference Proceedings Article 2021 Third International Sustainability and Resilience Conference: Climate Change, Nov 15, 2021
Authors: Kok Keen Hene, Muhammad Innan Khan, Muslich Hartadi Sustanto, Salah E Zoorob, Sri Sunariono

Comparison of Performance Properties and Prediction of Regular and Gamma-Irradiated Granular Waste Polyethylene Terephthalate Modified Asphalt Mixtures

Journal Article @ Open Access Polymers, Volume: 13, Issue: 15, Pages: 2610. Aug 6, 2021.

Authors: Aliyu Usman , Muslich Hartadi Sutanto , Madzian Napiah , Salah E Zoorob , Nura Shehu Aliyu Yaro , Muhammad Imran Khan

## Polyethylene Terephthalate (PET)

Effect of Cement Grouts Containing Irradiated Polyethylene Terephthalate on Properties of Semi-Flexible Mixtures

Journal Article Key Engineering Materials, Volume: 888, Pages: 3-8. Jun 9, 2021

Authors: Muhammad Imnan Khan, Lim Shwe Wen, Muslich Hartadi Sutanto, Madzlan Naciah, Salah C Zoorot

Engineering properties of irradiated waste polyethylene terephthalate (WPET) modified asphaltic concrete mixtures using the modified dry method

Journal Article 3 Open Acces

IOP Conference Series: Materials Science and Engineering, Volume: 1092, Issue: 1, Pages: 12025. Mar 1, 2021. Authors: Aliyu Usman , Rickey Santhanasamy , Muslich Hartadi Sutanto, Salah E Zoorob

Irradiated polyethylene terephthalate fiber and binder contents optimization for fiber-reinforced asphalt mix using response surface methodology

Journal Article 🔞 Open Access Ain Shams Engineering Journal, Volume: 12, Issue: 1, Pages: 2/1-282, 2021

Authors: Aliyu Usman, Muslich Hartadi Sutanto, Madzian Napiah, Salah F Zoorob, Suleiman Abdulrahman, Saeed Madibbo Saeed

Design optimization and statistical modeling of cementitious grout containing irradiated plastic waste and silica fume using response surface methodology

Journal Article Construction and Building Materials, Volume: 271, Pages: 121504, 2021

Authors: Muhammad Imran Khan, Muslich Hartsdi Sutanto, Maddan Napiah, Kaffayatullah Khan, Waqas Rafiq

16 oversea institutions

> 9 domestic institutions

Source: Lens.org

Advances in production of bioplastics by microalgae using food waste hydrolysate and wastewater: A review.

Journal Article Bioresource technology, Volume: 342, Pages: 125947. Sep 17, 2021

Authors: Jun Wei Roy Chong, Kuan Shiong Khoo , Guo Yong Yew, Wai Hong Leong, Jun Wei Lim, Man Kee Lam, Yeek-Chia Ho , Hui Suan Ng , Heti Siti Halimatul Munawaroh , Pau Loke Show

Macro and Micro Routes to High Performance Bioplastics: Bioplastic Biodegradability and Mechanical and Barrier Properties

Journal Article Gopen Acress Polymers, Volume: 13, Issue: 13, Pages: 2155. Jun 30, 2021
Authors: Olivia A Attallah, Marija Mojicevic, Eduardo Lanzagorta Garcia, Muhammad Azeem, Yuanyuan Chen, Shumayi Asmawi, Margare

Comparative Study of a Life Cycle Assessment for Bio Plastic Straws and Paper Straws: Malaysia's

Journal Article 🔞 Open Access Processes, Volume: 9, Issue: 6, Pages: 1007. Jun 7, 2021 Authors: Chun Hung Mov. Lian See Jan., Noor Fazikani Shopanwe. Azmi Mohd Sharitt., Juliy Jan Biological Methods for Carbon Dioxide Conversion and Utilization

Book Chapter Sustainable Rinconversion of Waste to Value Added Products, Pages: 165-177. Apr 21, 2021 Authors: Sidra Sagib, Ahmed Mulchtar, Sami Ullah, Muhammad Sagir, M B Tahir, Rabia Amen, Muhammad Babar, Abdullah G Al-Sehem

Bioplastic

Corn starch/PVA bioplastics—The properties and biodegradability study using Chlorella vulgaris cultivation

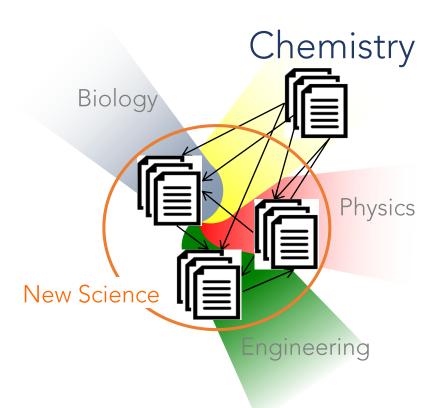
Journal Article Asia-Pacific Journal of Chemical Engineering, Volume: 16, Issue: 3, Feb 11, 2021
Authors: Rowen Lim., Peck Loo Kiew, Man Kee Lam., Wei Ming Yeoh, Mui Yen Ho

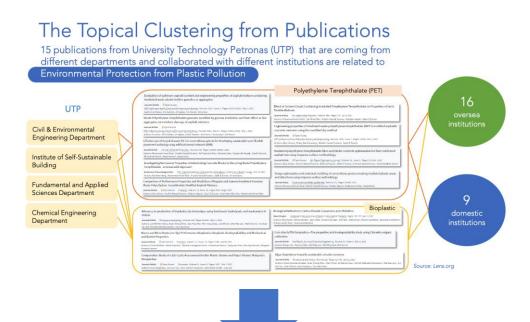
Algae biopolymer towards sustainable circular economy.

Journal Article Bioresource technology, Volume: 325, Pages: 124702. Jan 12, 2021

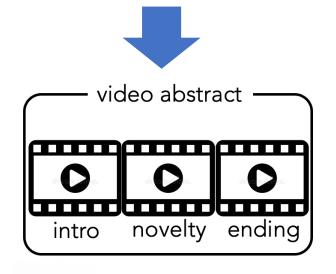
Authors: Vishno Vardnan Devadas, Kuan Shiong Khoo, Wen Yi Chia, Kit Wayne Chew, Heli Siti Hailmatul Munawaroh, Man Kee Lam, Jun Wei Lim, Yeek Chia Ho, Keat Teong Lee, Pau Loke Show

# The art of engagement: multidisciplinary to transdisciplinary

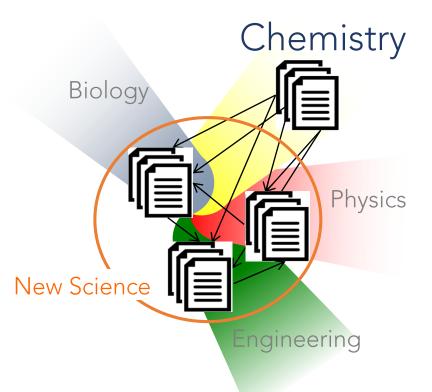


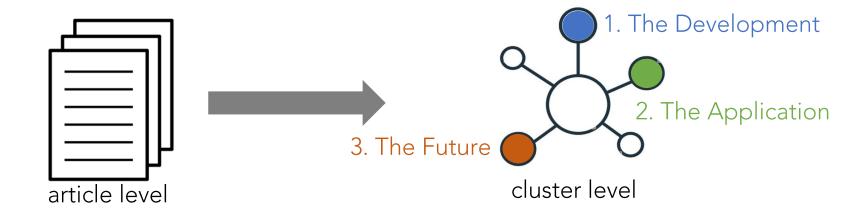


Multidisciplinary Research Highlight



# The art of engagement: multidisciplinary to transdisciplinary

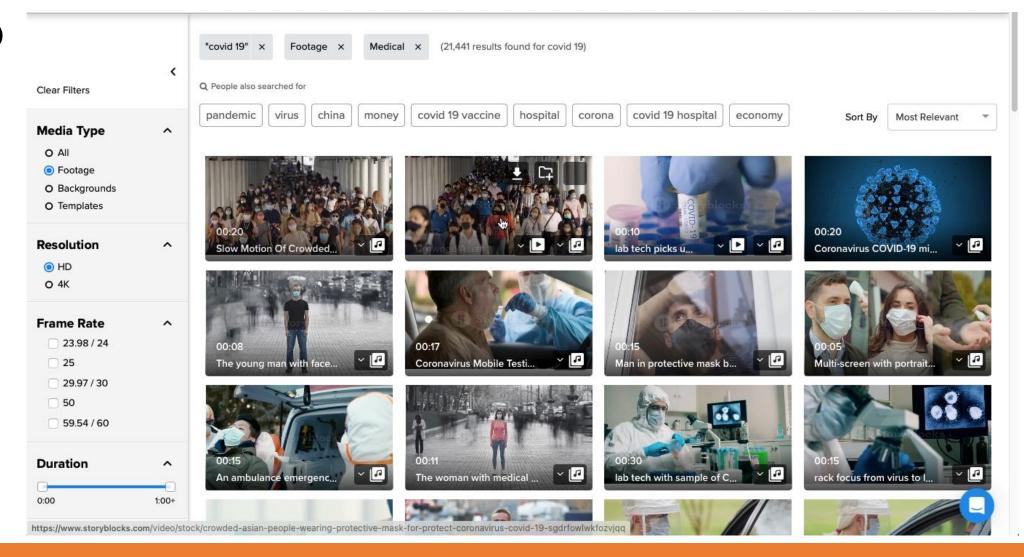




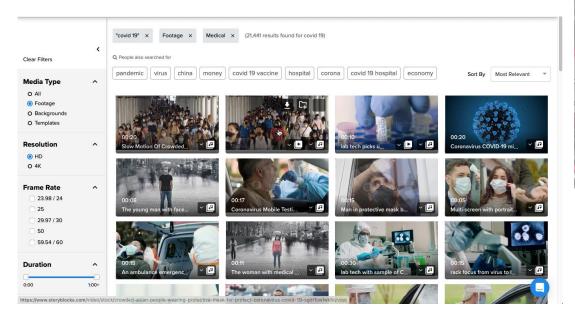


#### Let see what

a video can do

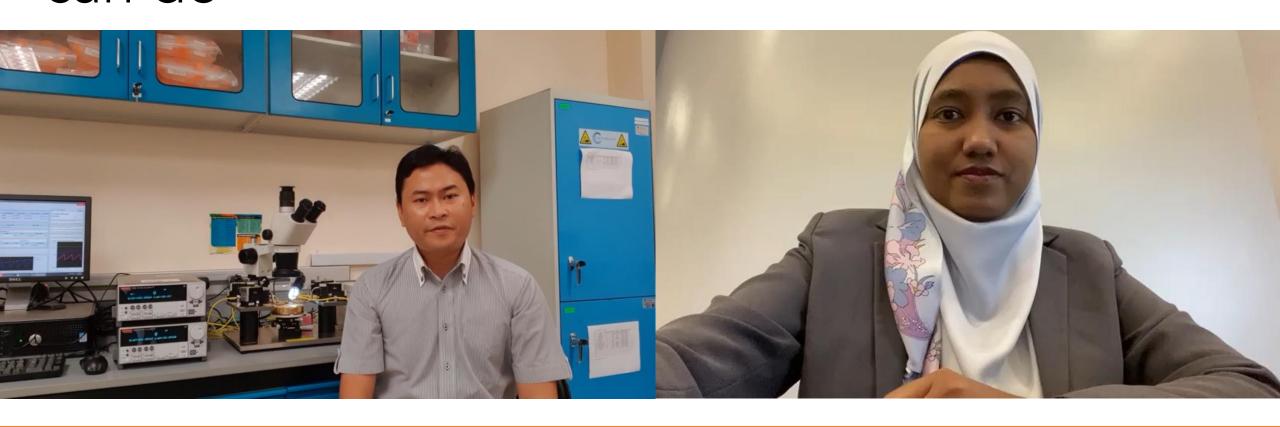


Stock video clip versus original video clip





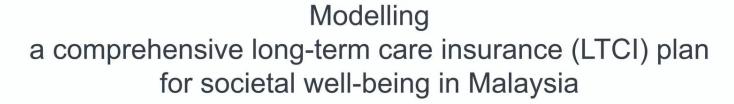
Stock video clip versus original video clip



#### Guided self-recording





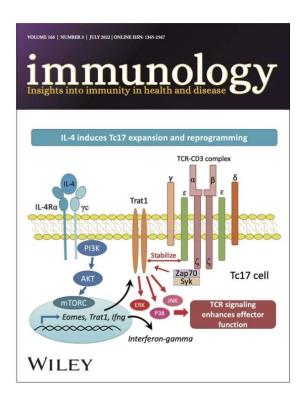


GPLPPKN0353

DR. NURUL AFIDAH MOHAMAD YUSOF (UTAR)
MS. SEOW AI NA (UTAR)
PROF. DR. LAI MING MING (MMU)
TN. HJ ABDUL SHUKUR ABDULLAH (LPPKN)
EN. IRWAN NADZIF MAHPUL (LPPKN)



#### Guided self-recording



#### Abstract

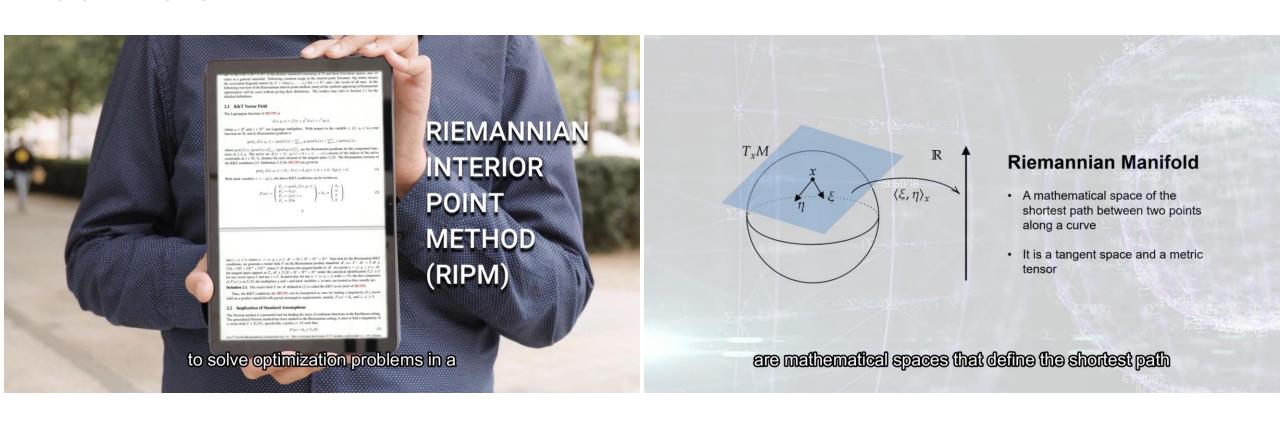
Ability of IL-17-producing CD8+T cells (Tc17) to transform into cytotoxic anti-tumour effectors makes them a promising candidate for immune effector cell (IEC) therapy. However, key factors regulating Tc17 reprogramming remain poorly defined, hindering translation of Tc17-based IEC use from bench to bedside. We probed the effects of multiple cytokines and underlying signalling pathways on Tc17 cells and identified pivotal role for IL-4 and PI3K/AKT in promoting Tc17 transformation into cytotoxic IFN-yproducing IECs, an effect dependent on Eomes expression. IL-4 not only triggered Tc17 cytotoxicity, but also induced cell expansion, which significantly improved the antitumour potential of Tc17 cells compared to that of IFN-y-producing CD8+ T cells (Tc1) in a murine model. Furthermore, IL-4/AKT signalling drove the upregulation of the T-cell receptorassociated transmembrane adaptor 1 (Trat1) in Tc17 cells to promote IL-4-induced T-cell receptor stabilization and Tc17 cytotoxicity. Finally, we proposed a possible procedure to expand human Tc17 from peripheral blood of cancer patients, and confirmed the function of IL-4 in Tc17 reprogramming. Collectively, these results document a novel IL-4/AKT/Eomes/Trat1 axis that promotes expansion and transformation of Tc17 cells into cytotoxic effectors with a therapeutic potential. IL-4 priming of Tc17 cells should be further explored as a cell therapy engineering strategy to generate IECs to augment antitumour responses.

#### **CONFLICT OF INTEREST**

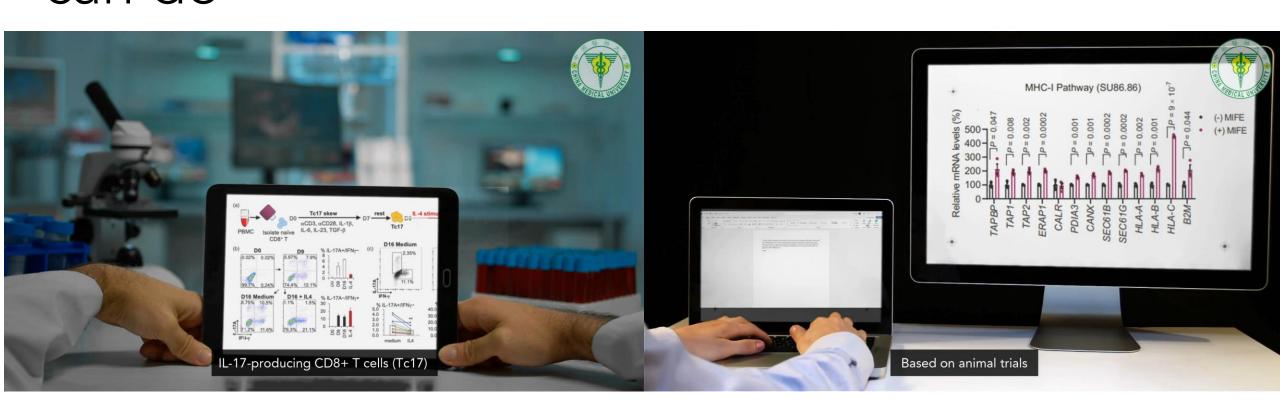
The authors have declared that no competing interests exist.

to IFN-γ producers, leading to enhanced antitumour activity and cytotoxicity of Tc17 cells

#### Basic effect and transition (animation)



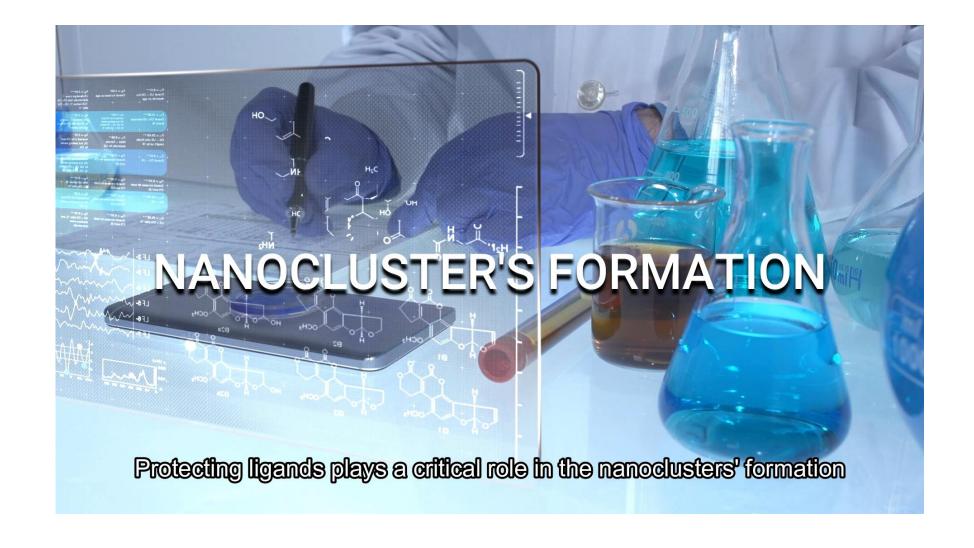
Green screen effect



#### Green screen effect



Green screen effect for motion



Blend original into stock video background



#### Track and label the object

由于Eu<sup>2+</sup>掺杂硅酸盐荧光粉具有很高的潜力

Due to its high potential

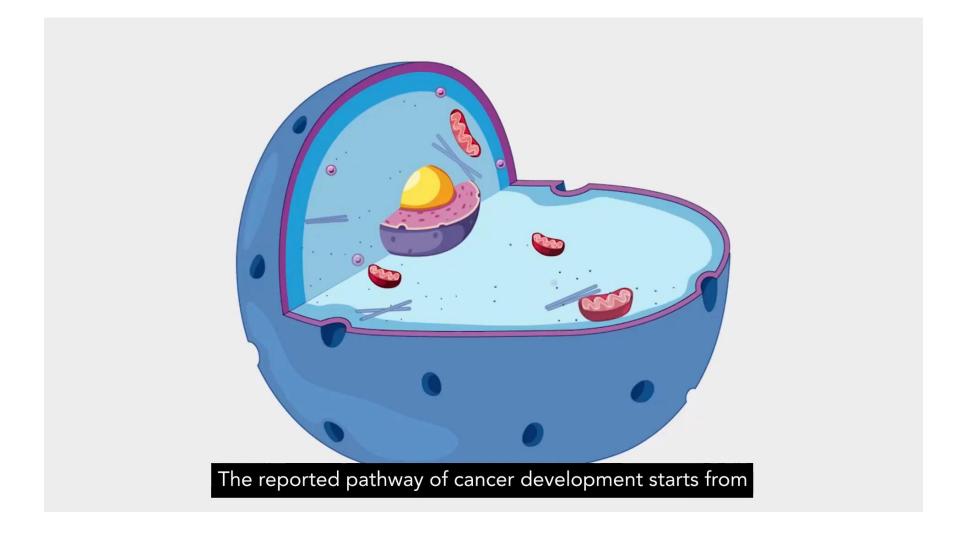
#### No language barrier



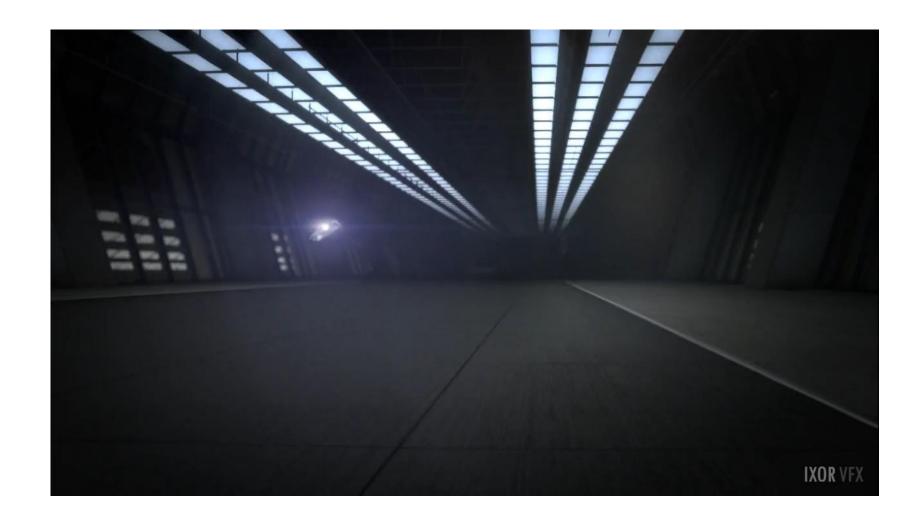
尽管荧光粉转换型发光二极管(PC-LED)已得到广泛应用

Although phosphor-converted light-emitting diodes (pc-LEDs) have been commonly used

#### Simple animation



### Average animation



### Complex animation



#### Full animated video

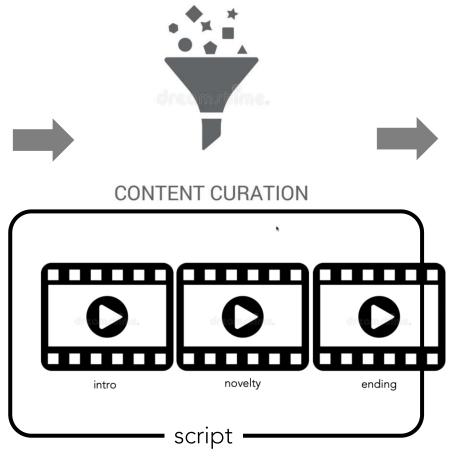


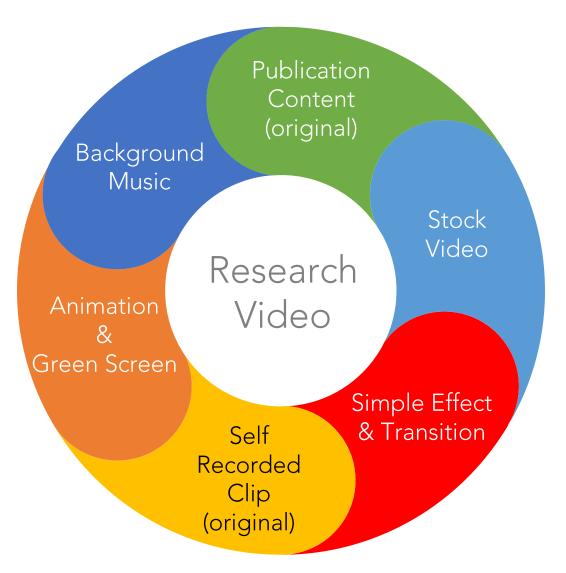


Full animated video + real people

## The making of research video

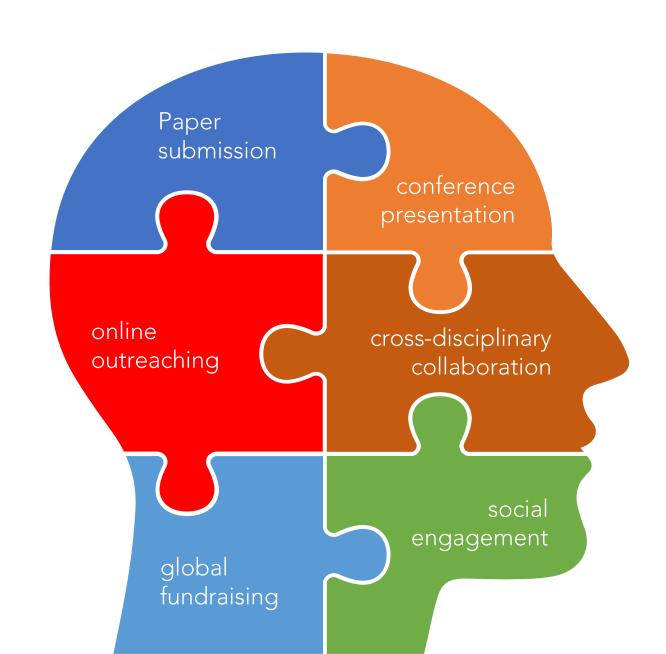






## The making of research video





### Thank You







woeifuhwong@gmail.com

