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“When opportunity knocks, open the door”

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DOCTORAL SCHOOL

INTERNATIONAL CONFERENCE

WHEN OPPORTUNITY KNOCKS, OPEN THE DOOR

2022 2023

UNIVERSITY OF SZCZECIN

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9.00AM-12.00AM	Contemporary Problems in Science *Dr Umashankar Singh*
12.00AM-02.00PM	How to still be in love in science in times of points and rankings *Dr Paulina Niedźwiedzka-Rystwej, Assoc. Prof.*
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03.00PM-05.00PM	Principles of Transparency & Best Practices in Scholarly Publishing *Prof. Dr Yuriy Bilan*

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Commercialization of Research Results from the Perspective of Materials Engineering

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The commercialization of research results in materials engineering stands as a pivotal process that translates innovative research discoveries into practical applications. Materials engineering, with its primary aim of enhancing the properties and performance of materials, emerges as a significant field in improving sustainability and efficiency across several industries. This multifaceted process necessitates interdisciplinary collaboration, unifying fields such as chemistry, physics, and materials science to seamlessly transform research findings into market-ready products or comprehensive solutions. Intellectual property protection assumes a significant role in this journey, primarily through the careful navigation of patent laws, ensuring the safeguarding of unique material innovations. Furthermore, the establishment of effective collaborations between academia and industry becomes an essential cornerstone of successful commercialization. This synergy not only leverages academic research expertise but also harnesses industry resources and offers a platform for real-world validation. Ultimately, successful commercialization in materials engineering emerges as the vital bridge connecting the realm of academic innovation to the tangible real-world impact, thereby fostering advancements in sustainability, technological progress, and material excellence across a diverse array of sectors. The profound implications of this process extend beyond the laboratory, contributing to a future marked by transformative advancements driven by the power of materials engineering innovation.

Extraction, structural characteristics and immunomodulatory effects of the polysaccharides from the green seaweeds *Ulva lactuca*, *Halimeda opuntia*, *Caulerpa racemosa* and *Chaetomorpha antennina*

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Bioactive compounds contained in green seaweed polysaccharides (i.e., ulvan, sulfated or/and pyruvylated β-d-galactans, sulfated xyloarabinogalactan) are still being explored for exploitation by pharmaceutical and nutraceutical industries. The current study was conducted on sulfated polysaccharides from four different green seaweeds, *Ulva lactuca*, *Halimeda opuntia*, *Caulerpa racemosa*, and *Chaetomorpha antennina*, in order to investigate their cell-based bio-activities. The impact of these extracts on cytotoxicity, cell proliferation and migration was evaluated using three different cell lines (HDF, HaCaT, RAW264.7) reflecting the various cells involved in wound healing. An aPTT test was performed to evaluate anticoagulant activity. Ulvan extracts from *Ulva lactuca* significantly increased HaCaT (at 0.06 μg/μL) and HDF (at 0.5 μg/μL) cell proliferation.

Halimeda opuntia (i.e., G2-2A, 150.3 ± 10.4%, p<0.0001) significantly increased HDF cell proliferation. However, *Chaetomorpha antennina* showed the highest cell migration ability on HDF and HaCaT cells. This study showed that *Ulva lactuca* (G1-2B, 0.5 μg/μL) and *Chaetomorpha antennina* (G4-1A, 0.5 μg/μL)-derived polysaccharides effectively improved phagocytosis ability. Furthermore, RAW264.7 cells treated with *Halimeda opuntia* (G2-2A, 0.5 μg/μL) showed significant decreasing in intracellular NO production (i.e., anti-inflammatory) within 24 h compared to no treatment group. Green seaweed polysaccharide exhibited no toxicity, as evidenced by relatively low expression of pro-inflammatory cytokines (i.e., TNF-α). This study suggested that green seaweed sulfated polysaccharides from *Caulerpa racemose* possess anticoagulant activities. Polysaccharides from *Ulva lactuca* and *Chaetomorpha antennina* may have wound healing properties, since the proliferation of skin and immune cells can promote healing. This study has yielded valuable insight into the potential biomedical applications of green seaweed polysaccharides for the pharmaceutical, and biotechnology industries.

Green Growth, Human Capital, and ICT: A Comprehensive Analysis of the Baltic Sea Countries and V4 Regions.

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This paper explores the intricate relationship between green growth, human capital, and Information and Communication Technology (ICT) with a distinctive focus on the Baltic Sea countries and the V4 regions. Given the rising importance of sustainable development and the pivotal role of human capital and technological advancements in shaping it, understanding these interconnections becomes imperative. By utilizing a comprehensive dataset encompassing the regions, this research seeks to investigate deeper into the underlying mechanisms and causative factors that drive this nexus. To substantiate the assertions, the study empirically tests the hypotheses by deploying an advanced econometric model complemented by the Light GBM machine learning algorithm. The dual application of traditional econometrics and cutting-edge machine learning provides a robust analytical framework, enhancing the validity and depth of the findings. The main findings of empirical study: (1) There is a U-shaped relationship between HC and GG (2) Given other factors affecting GG, HC and economic growth play the most crucial role in the influence framework. Preliminary results indicate intricate feedback loops and interdependencies among green growth, human capital, and ICT. The finding is important for further analysis of sustainability, education, and technology in the context of the Baltic Sea countries and the V4 regions.

Craticula vanensis sp. nov., a new species of diatom from the highly alkaline Lake Van (Turkey) displays an extra-long mitochondrial genome with several copies of the rRNA operon

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The diatom genus Craticula was described by Grunow (1867). In 1991, Mann & Stickle diagnosed the characteristic of Craticula in detail to better separate Navicula sensu stricto and Craticula. The genus occurs in various habitats from acidic oligotrophic waters to alkaline, saline, eutrophic and heavily polluted waters. Algaebase lists 72 taxonomically accepted species for Craticula. So far, 11 of these species have been recorded in Turkey.

A new species of Craticula has been discovered in Lake Van (Anatolia, Turkey), which is the largest soda lake in the world, within the frame of a PhD thesis dedicated to the biodiversity of the diatoms from this extreme environment. Craticula vanensis has been described based on its morphology combined with molecular markers. The complete plastid and mitochondrial genomes have been sequenced. Only long-reads sequencing could resolve the complexity of the extra-long mitochondrial genome, which is characterized by an alternative genetic code and the presence of several copies of the rRNA operon.

Seize Opportunities When Ready

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"When opportunity knocks the door" is a widely recognized idiom that encapsulates the idea of seizing favorable chances as they arise in life. This abstract is about general ideas that held in the conferenceswith the same name. Opportunity is a fleeting and often unpredictable entity that presents itself when one least expects it. In the journey of life, individuals encounter numerous closed doors, symbolic of missed opportunities or unexplored possibilities. However, it is the moments when opportunity knocks the door that define personal and professional growth. The phrase underscores the importance of preparedness and awareness. Opportunities may not come with a warning; they arrive unannounced. Those who remain vigilant and receptive are the ones best positioned to capitalize on these moments. It demands a keen eye, open mind, and readiness to act swiftly.

Moreover, "when opportunity knocks the door," it represents the intersection of timing and readiness. The timing of opportunities aligns with one's own readiness to embrace them. It emphasizes the need for continuous self-improvement and skill development, as these qualities enhance the likelihood of recognizing and making the most of opportunities. Furthermore, seizing opportunities often involves stepping out of

one's comfort zone. It may require risk-taking and a willingness to embrace change. Those who hesitate or resist may find themselves regretting missed chances.

In conclusion, "when opportunity knocks the door," it serves as a reminder of the dynamic nature of life's opportunities. To harness these moments, one must be vigilant, prepared, and willing to take risks. It is through these open doors that personal and professional growth flourishes, shaping the course of one's journey in life. Embracing these moments can lead to fulfilling experiences, enhanced skills, and the realization of long-held aspirations. Therefore, being receptive to the knock of opportunity can be the key to a brighter future.

Financing of the scientific research

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A key tenet of expanding knowledge, innovation, and societal advancement is funding scientific research. This abstract offers a succinct summary of the problems and solutions involved in supporting scientific research.

The direction of scientific discovery and innovation is impacted by the complex task of securing appropriate funding. The funding of scientific research is of utmost importance in the modern world, where the complexity of world problems demands novel solutions. Researchers frequently struggle with scarce funding, increased grant competition, and the requirement to show quick practical applications. This situation emphasizes the value of various funding sources, such as public institutions, private investments, and nonprofit groups. Adopting collaborative research strategies can also make the most of resources and knowledge. A careful deployment of resources is necessary in addition to greater investment to ensure the sustainability of support for scientific research. It's crucial to strike a balance between long-term, curiosity-driven research and short-term, applied research if you want to solve problems right away and foster ground-breaking discoveries. Additionally, ethical issues like equitable profit allocation from research and open access publishing are brought to the fore. Additionally, fostering a culture of research that emphasizes interdisciplinary cooperation, inclusivity, and openness improves the effectiveness and efficiency of research funding.

Summarily, funding scientific research is essential for solving the most important issues facing the world today and spurring innovation. Societies may fully utilize the power of scientific inquiry to create a better future by supporting a variety of funding sources, resource allocation tactics, ethical principles, and collaborative research models.

The Role of Inspirational Work Environments on Scientific Research Methodologies

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The context within which scientific research unfolds exerts a significant influence on the methodologies adopted for investigations. The important role played by inspirational work environments in shaping and advancing scientific research methodologies cannot be overstated. Such environments nurture an atmosphere that not only encourages but also stimulates creativity, collaboration, and an unceasing pursuit of innovative approaches to scientific inquiry. Researchers immersed in inspiring settings naturally gravitate towards exploring interdisciplinary connections, thereby fostering the development of methodologies that transcend

the constraints of traditional disciplinary boundaries. Moreover, these environments instill a collective commitment to excellence, compelling researchers to invest the requisite time and effort into refining and validating their methodologies. Visionary leadership and mentorship within these settings are instrumental in cultivating emerging researchers and guiding them toward the development of robust research methodologies. In conclusion, an inspirational work environment serves as a dynamic catalyst that propels the evolution of scientific research methodologies, fostering interdisciplinary collaboration, promoting rigorous standards, and empowering emerging researchers through mentorship and visionary guidance. The profound impact of the workplace environment on the methodologies that underpin scientific progress and innovation is undeniable.

Methodology of scientific research

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The scientific method is the practice of using testing and experimentation to objectively determine facts. The fundamental steps are to make an observation, generate a hypothesis, make a prediction, design and carry out an experiment, and then analyze the data. Many fields, from science to commerce to technology, can benefit from the scientific method's guiding principles. During the conference carried out at the University of Szczecin on the subject of the methodology of scientific research, the details of science and research are discussed briefly from different points of view in line with the subject.

During the conference, the following contents are explained and discussed: Namely, science and scientific research, classification of science, research process in scientific practice, main research methods and data types in science, qualitative research, quantitative research, and building research relations with respondents in the methodology of management sciences. I have learned a lot about scientific research methodology, along with practical aspects. In addition, I have gained knowledge about why we conduct scientific research during our scientific activities, which was part of the scientific research methodology given during the conference.

I really appreciate the organizers of the conference, who prepared the interesting topic entitled "When opportunity knocks, open the door". It was a wonderful time in my career. I have learned how to become a better scientist and teacher, which I have been looking for for a long time. Not only that, but how to commercialize the scientific results and finance the scientific research were also discussed during this conference session.

Popularization of Scientific and the role of modern scientists

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Scientists contribute to human knowledge by adhering to the scientific method. They begin by making observations about a phenomenon and formulating questions related to it. Subsequently, they develop hypotheses concerning the phenomenon and carry out data collection activities. Following this, they test their hypotheses using the most appropriate analytical methods and ultimately arrive at their research findings. In practical terms, the dissemination of these results typically takes the form of publications. For scientists, this constitutes an integral part of their daily routine. Importantly, publishing contributes to the expansion of human knowledge. However, a critical question arises: how can we ensure that this scientific knowledge reaches a broader audience beyond the scientific community? This is because scientific publications often

target a specialized audience, rather than the general public. Hence, the practice of popularizing science can play a pivotal role in spreading scientific findings to individuals who are not scientists, thereby benefiting human civilization. Scientific publications primarily serve the purpose of disseminating findings among the scientific community, rather than reaching the general public. Frequently, scientists tailor their publication strategies toward the scientific community, even though the ultimate beneficiaries are the general public. Therefore, it is advisable to direct these efforts toward policymakers and practitioners during the scientific publishing process. This approach ensures that updated knowledge is made available to formulate and implement improved policies and practices, ultimately enhancing the quality of life for the general public. In the process of popularizing science, the scientist's role encompasses conducting high-quality research and sharing these results with policymakers and practitioners. Consequently, the overall success of this endeavor hinges on how scientists manage their entire research projects. As such, scientists must possess not only wisdom, imagination, and creativity but also effective management skills, proficient communication abilities, and networking capabilities.

Hypothesis: asking why or why not?

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This abstract explores the complex realm of hypothesis testing, with a focus on the interaction between the queries "why" and "why not." Hypotheses are fundamental building blocks in scientific study that guide experiments and try to explain events. To examine these assumptions, quantitative and qualitative approaches can be done. Surveys and statistical analysis look at correlations between variables quantitatively. To provide detailed insights into the underlying mechanisms, qualitative methods such as in-depth interviews and content analysis are used. By combining these approaches, a comprehensive grasp of the "why" and "why not" is attained, addressing both the reasons for these results as well as whether a hypothesis is confirmed or disproved. Data is collected through surveys distributed among diverse populations and in-depth interviews conducted with experts in the field of study. Independent, dependent, and control variables are all being examined. Making null and alternative hypotheses, testing them, and generating conclusions based on the data gathered are all steps in the process. Study also goes through a comprehensive peer review process to guarantee its reliability and credibility. Respected authorities in the field assess the methodology, procedures for gathering data, and methods used for analysis, offering insightful comments, and validating the study's findings. In summary, research must exemplify a comprehensive approach to hypothesis testing by integrating quantitative and qualitative methodologies, utilizing diverse data collection methods, exploring various variables, and subjecting the research for peer review, ultimately enhancing our understanding of the "why" and "why not" in scientific inquiry.

Digital Media Integration in Academic Education

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Modern pedagogy now includes the integration of digital media into academic education as a core component. This work focuses on the impacts, difficulties, and possibilities of digital media as it reshapes the educational landscape.

Online platforms, multimedia materials, interactive simulations, and virtual environments are just a few of the technologies that fall under the umbrella of digital media. These resources give teachers new ways to

engage students, promote active learning, and accommodate various learning preferences. Digital media also makes it easier to access a variety of information, bridging regional barriers and encouraging lifelong learning.

Digital media integration into education is not without its difficulties, though. It's important to carefully navigate problems like the digital divide, privacy concerns, and information overload. Additionally, in order to stay current and fully utilize the advantages of digital media, educators must engage in ongoing professional development. This is due to the rapid advancement of technology.

Despite these difficulties, there are significant potential advantages. With the help of digital media, learning can be personalized so that each student can explore a subject at their own pace. Additionally, it promotes cooperation amongst students and with other learners throughout the world. Digital assessment systems also give teachers insightful data on student achievement, allowing for data-driven decision-making.

This abstract serves as a springboard for future investigation into the dynamic and shifting interaction between academic learning and digital media.

Turning Ideas into Impact: Navigating the Commercialization Maze for Research Results

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In order to bridge the gap between scientific innovation and practical applications, the commercialization of research discoveries is a complex and dynamic process. In-depth analysis of the commercialization of research results is needed, with an emphasis on its importance, difficulties, and changing environment. The lecture on Commercialization of Research Results offered a comprehensive knowledge of the commercialization process and its effects on numerous scientific and technology sectors. The lecture explained the critical role that research commercialization plays in promoting innovation ecosystems and accelerating economic growth. It detailed how effective commercialization may result in the production of new goods, services, and businesses, fostering the growth of the economy and society. The lecture also identified the main problems with research commercialization. These difficulties include matters like intellectual property protection, channels for transferring technology, legal restrictions, and the requirement for productive cooperation between academics and business. Researchers, and industry stakeholders can benefit from its insightful knowledge to effectively negotiate the potential and obstacles associated with the commercialization of research findings. Stakeholders may create an atmosphere where research can be translated into real-world social and economic benefits by having a thorough awareness of the complexity and dynamics of this process.

Entrepreneurship Determinants: A Literature Review

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The study of entrepreneurship continues to grow, one of them are entrepreneurship determinants. Based on the previous articles, there are studies that is conducted by Rogoff. It categorizes into internal determinant (ID) and external determinants (ED). The purpose of this study is to find out the latest determinants that is included, excluded, and added based on Rogoff's study. The method used is a Systematic Literature Review (SLR) of articles on ScienceDirect in 2019 to 2023. The findings of this study are expected to contribute to the science, particularly regarding these entrepreneurship determinants, and can be used as a reference for future research or for conducting research in areas that have not yet been discussed. In practice, particularly for

entrepreneurs, the findings of this study are expect to provide guidance on how to develop entrepreneur in the future.

Financing of the scientific research

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The financing of scientific research is an essential aspect of advancing knowledge and innovation. Research funding is generally provided through various sources, including government grants, corporate investments, and non-profit foundations. The funding is often allocated through a competitive process, where research projects are evaluated, and the most promising ones receive financial support. Government grants play a significant role in funding scientific research. The Polish government provides funding for scientific research through various sources, including the state budget, statutory funding, and grants. The National Science Centre (NCN) is a governmental grant-making agency responsible for providing financial support for the conduct of basic science research in Poland and various programs to assist scientists throughout their careers. Additionally, another potential funding sources can be from other institution such as DAAD offices (German government) that provides scholarships for graduates, scientists, and higher education institutions in various fields of study and research. In conclusion, the financing of scientific research is essential for driving innovation, advancing knowledge, and finding solutions to societal challenges. Government grants, corporate investments, and non-profit foundations all contribute to funding scientific research projects. By providing financial support, these entities enable scientists to conduct experiments, analyze data, and make significant contributions to their respective fields.

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12.00AM-02.00PM	How design thinking can turn your strategy into reality – managing ideas D*r Jarosław Korpysa, Assoc. Prof.*

Consumer Pro-Environmental Behavior: Recycling and Resource Conservation for Climate Change Mitigation

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Climate change has emerged as one of the most serious global threats in recent decades, impacting both human societies and environment in numerous detrimental ways. Human activities are the primary cause of climate change issues. Hence, adopting pro-environmental consumer behavior can make a significant contribution to mitigating climate change. Thus, this study aims to identify the key influential factors affecting consumers' recycling & resource conservation pro-environmental behvaior. This research introduces an innovative conceptual framework that expands upon the theory of planned behavior (TPB) and the Attitude-Behavior-Context (ABC) model to assess the actual consumer pro-environmental behavior. A total of 300 valid responses were collected through a self-administered questionnaire. Structural equations model and Necessary Condition Analysis were applied to test the hypotheses. Results show that subjective norms, perceived behavior control, and perceived value have a positive and significant relationship with consumers' recycling & resource conservation behavior. The noble results of this study are that ecological motives, green marketing tools, and green trust have positive and significant relationships with consumers' recycling & resource conservation behavior. To my knowledge, this is the first empirical study that broadly provides a theoretical framework for pro-environmental behavior in Bangladesh. Theoretical, managerial, and policy contributions of this study enrich the marketing and consumer behavior literature and play a significant role in ensuring a more sustainable environment.

Rare Earth Elements in Green Energy Revolution

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Rare earth elements (REE), consisting of the 17 elements on the periodic table, play a pivotal role in the global transition to green energy. These metals are in high demand for green energy technologies like magnets, wind turbines, solar panels, and computers, crucial for reducing carbon emissions in electricity generation and enhancing energy efficiency. For instance, $RE_5Pt_2In_4$ (RE = Gd-Tm) compounds show potential in low-temperature magnetocaloric refrigeration applications[1]. Currently, clean energy technology represents about 20% of global REE consumption, yet its importance is set to grow (U.S. Department of Energy, 2010). REE are essential for net-zero emission technologies and consumer electronics production. However, their extraction and processing are largely monopolized by one nation. According to the U.S. Geological Survey in 2020, China led global rare earth production (58.3%), with the U.S. (15.8%), Myanmar (12.5%), Australia (7.1%), Madagascar (3.3%), and other nations (2.9%) trailing behind. To counter this monopoly, international collaboration, improved Environmental, Social, and Governance (ESG) standards, and adequate state funding among allied nations are crucial. The world is shifting toward a green economy, and REE and magnets are vital for this transition. Without them, we can't build the sustainable technologies of the future

or meet the demand for consumer electronics. Addressing the rare earth monopoly is imperative for global sustainability and energy security.

Design thinking

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Businesses in a variety of industries are using design thinking as a strategy of innovation to create products and services that address complicated problems. As a tool to advance innovation and structure creation processes across a variety of disciplines, including product development, food creation, and social science research, the product design and development process known as "design thinking," which was inspired by the strategies of designers, is becoming more and more popular. Design thinking is becoming more and more common in the field of resolving complex issues in social and ecological systems, going beyond the confines of creative and design professions. The three main themes of inspiration, ideation, and implementation as defined by Tim Brown, CEO of IDEO (2009) have led me to classify design thinking within the social science field—specifically, systems thinking, organisational learning, and action research. Through a streamlined design structure, the social sciences research technique includes ideas from design research, systems theory, organisational development, and social psychology. The incorporation of learning and reflective practises into the design thinking framework results in the development of a hybrid model of design thinking that is a more beneficial tool for framing, establishing in context, and solving these types of difficulties within teams.

When the Opportunity Arises: Facilitating Learning Opportunities through Teachable Moments

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The act of accessing opportunities necessitates the possession of adaptability, ingenuity, and the capacity to identify and react to unforeseen prospects that emerge within regional societies. It is imperative to prioritise active listening and responsiveness to the needs of the community, as this strategy has demonstrated more efficacy compared to rigid adherence to predetermined action plans. By maintaining a receptive attitude towards novel techniques and actively recognising like-minded prospects, individuals can optimise their likelihood of achieving achievement. Moreover, possessing information and expertise in particular domains, such as environmental health, can create prospects for collaboration and the exchange of resources within local networks. Teachable moments offer valuable prospects for acquiring knowledge and fostering personal development, both within the context of library instruction sessions and during reference interactions. The identification and effective utilisation of these instances can significantly augment the educational experiences of pupils. In general, the act of accessing chances necessitates the cultivation of adaptability, responsiveness, and proactivity in actively pursuing and leveraging prospective avenues for advancement. Libraries may enhance their resources and the quality of services provided to their communities by proactively engaging in and participating in local networks and collaborations. This has the potential to facilitate a more cohesive and all-encompassing strategy towards health education and the dissemination of information, thereby yielding advantages for both students and library users. Moreover, capitalising on opportune instances during library instruction or reference transactions has the potential to cultivate a climate of continuous learning and enable individuals to assume agency over their personal health

and overall welfare. In conclusion, the proactive and adaptable nature of libraries enables them to optimise prospects for expansion and exert a good influence on the individuals they cater to.

How to still be in love in science in times of points and rankings

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In today's contemporary scientific environment, where success and recognition are often influenced by quantitative metrics and rankings, it can be a challenge to maintain the deep love for science that initially drew us into this field. Nonetheless, there are concrete strategies available to protect and even deepen our affection for science.

Traditionally, science has been propelled by an insatiable curiosity and an inherent longing to comprehend the world. To preserve this affection, it is imperative to prioritize curiosity over metrics. Instead of asking questions solely to accumulate publications or citations, we should pose inquiries born from a genuine sense of wonder about the universe.

Collaboration stands out as another important countermeasure to the prevailing culture centered around metrics. By engaging in collaborative efforts with fellow scientists on meaningful undertakings, we can rediscover the delight of shared exploration. The feeling of camaraderie and shared purpose that results from such collaborations often surpasses the pursuit of individual recognition.

Moreover, mentorship and teaching have the potential to rekindle the fervor we initially experienced when embarking on our scientific journeys. Guiding and inspiring the next generation serves not only as a means of knowledge dissemination but also as a way to revive that initial excitement.

Lastly, it is worthwhile to explore interdisciplinary avenues. Venturing beyond the confines of conventional scientific disciplines allows us to tread on uncharted terrain. The fusion of ideas from diverse fields can revive our passion for science by introducing fresh perspectives and novel pathways for exploration.

In conclusion, although quantitative metrics and rankings may hold sway in today's scientific landscape, our love for science need not diminish. By giving precedence to curiosity, nurturing collaboration, engaging in mentorship, and embracing interdisciplinary approaches, we can not only endure but also thrive in this metrics-oriented era, ensuring that our ardor for science remains vibrant and enduring.

Circular Business Model Innovation

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A business model is the core of a company; without a business model, a company cannot run smoothly and move forward. However, sometimes companies do not realize that their business model is a strategic asset and defines the logic of transforming raw materials into goods and services to create profit. A business model is a primary entity that cannot be separated from a company. It starts from a linear one that only considers raw materials to finished goods to a circular business model that considers waste treatment and extends the product life cycle to the maximum. This shift was triggered by the innovation process rooted in environmental problems (climate change, global warming, and others) that made companies slowly opt for a circular economy because of limited resources. The business model is a strategic tool to implement the

circular economy in companies and increase the company's value. This paper aims to identify the relationship between the circular business model and the circular economy in theory and practice. The literature review study was taken from the two largest journal sources, namely Scopus and World of Science (WoS), and then processed with VosViewer to analyze the relationship of the topic between existing papers. The results of this research prove the hypothesis of a positive correlation between business models and circular economy to make a circular business model. There is still an opportunity to collaborate between the circular business model and innovation and sustainability. According to bibliometric analysis, the topic started in 2016, meaning there are still many possibilities to explore by observing the relationship between the circular business model and innovation

Preliminary Study of Scaling Prevention in Geothermal Power Plants Using Adsorbent Hydrogel NIPAAM-co-Chitosan

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One of the most common problems in the operation of the geothermal power plant is silica scaling. Geothermal brines usually contain a lot of dissolved minerals such as Na, K, Si, Ca, Mg, Al, Fe, Cl, S, O, C, B, Li, As, Cu, Zn, Ag, Au, and other elements in ionic and molecular forms. Generally, in high-temperature geothermal resources, where the operating temperature is ≥ 200 °C, the scaling is more likely to be occurred due to the steam-phase separation process in flash-steam geothermal power plants. Therefore, ions removal in geothermal wastewater or brines is crucial to reduce the potential of scaling in the reinjection well facilities. The study aims to investigate the efficiency rate of ions removal in geothermal wastewater by using adsorbent hydrogel NIPAAM-co-Chitosan. The water samples from the Dieng geothermal power plant in Indonesia were used for the experiment. The experiment is comprised of the following tasks: 1) water samples from several locations, such as production wells, separators, discharge waters, cooling tanks, hot springs and rivers; 2) the preparation and synthesize materials of adsorbent hydrogel; 3) the experiment of geothermal water treatment using adsorbent ionic hydrogels, two (10, 50°C) different temperatures adsorption used; 4) the physical-chemical analysis from selected water samples carried out at Laboratory of AGH University of Science and Technology.

Abstract on the topic "Principles of Transparency & Best Practices in Scholarly Publishing"

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The number of publications that allow academics, researchers, and postgraduate students to submit articles and book chapters swiftly and conveniently has significantly increased in recent years. This can be attributed to several issues, including increased Internet use, the Open Access movement, academic pressure to publish, and the advent of publishers with dubious interests, casting doubt on the legitimacy and scientific rigor of the articles they publish. All of this has altered the intellectual and scientific publication landscape, allowing for the emergence of journals with editing methods that differ from those of genuine journals. Predatory publishers are so named because their manuscript publishing procedure deviates from the norm (extremely

short publication dates, low-quality peer-review, unusually low rejection rates, and so on). Predatory publishing hurts scientific and social science literature. These publications' publication standards have been called into question. Many professors have noted difficulties in evaluating the quality of publishers and journals. Significant research has been published to detail the establishment and implementation of faculty retention, promotion, and tenure criteria that provide faculty with precise instructions and guidance on evaluating the quality of publishers and journals. A continual practice is the conduct of reviews on the issues of journal quality, scholarship for promotion and tenure, and best practices for evaluating scholarship at academic institutions. Consistent research in this subject will aid in providing direction to faculty in determining journal quality. The faculty retention, promotion, and tenure guidelines for each of the research, teaching, and practice tracks could be altered to reflect these practices based on predetermined specific guidelines. These principles, if followed consistently, will give clarity for the promotion and tenure review committees of hardworking academic members.

Multidisciplinary study combined with design thinking in strategy and execution

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Several industries, governments, institutions and organizations are constantly challenged to bridge the gap between strategy and execution which require dynamic and complicated approaches. In that case, necessitating a multidisciplinary study perspective to effectively navigate the development is required to achieve the desired outcomes. Multidisciplinary study enables us to get a comprehensive insight into various perspectives of the cases. Moreover, it offers a thorough understanding of difficulties and possibilities that influence strategic decisions by combining information from numerous disciplines, including economic, social, technological, environmental and other aspects. While multidisciplinary study combined with design thinking, it serves as the link between strategy and execution which transforms intangible concepts and strategies into concrete, customer-focused solutions, solutions for root causes problems, and so on. Using this combination may transform strategic vision into well-defined feasibility and initiatives that are attractive to stakeholders, consumers, employees, and others. Its combination lies in the ability to foster creativity, cooperation, and adaptation by involving cross-functional teams in the strategy, the advantages of diverse perspectives and the joint development of creative and innovative solutions. It could be also implemented in scientific university research to bridge the gap between novel/theoretical research and practical/business cases.

Sustainable Living and “Green Lifestyle” Campaign by Indonesian Environmental Communities on Instagram

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Sustainable living is a vehement theme on the digital platform that pulls together citizens, government, media, and community organizations. Sustainable living has also become one of the essential campaigns in the environmental sustainability program (the 13th SDG) proposed by the United Nations. This study

examines three Indonesian environmental community accounts on Instagram which they have been actively campaigning and educating their audience to join in their digital spaces of activism in sustainable living and green lifestyle. Furthermore, by using qualitative analysis through Instagram content analysis, these communities/organizations highlight and discuss the importance of environmental sustainability. Their strategies in engaging their audience to be responsible and ethical towards the environment by reducing plastic use, agro-food sustainability, and sustainable fashion. By creating digital campaign for sustainable living is an essential strategy that can result in popularizing “green lifestyle” and give awareness to audience about the impact of climate crisis.

Didactic modes : Unlocking the Power of Peer-to-Peer Education in the Digital Age

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Peer-to-peer education represents a dynamic learning approach where individuals of similar ages, backgrounds, or interests come together to teach and learn from one another. At its core, this educational model thrives on the notion that individuals often learn more effectively from their peers than through traditional teacher-student relationships. Peer-to-peer education manifests itself in various forms, including peer tutoring, peer mentoring, and collaborative learning groups. In recent years, the digital revolution has profoundly transformed the landscape of peer-to-peer education, particularly within academic settings. The proliferation of social media platforms and digital tools has made it possible for students to seamlessly connect and collaborate with their peers from across the globe. For instance, students now have the ability to establish online study groups or engage in discussion forums on platforms such as Facebook, Twitter, or Reddit. These virtual spaces serve as hubs where ideas are exchanged, questions are raised, and constructive feedback flows freely. Moreover, digital media has expanded the scope of peer-to-peer learning through the availability of online resources such as educational videos, podcasts, and blogs. These resources empower students to augment their classroom education while fostering self-directed learning. In addition to providing supplementary content, digital media allows for the creation of interactive learning experiences that enable students to engage with course materials in innovative and immersive ways. One of the most compelling advantages of leveraging digital media in peer-to-peer education is its capacity to deliver immediate feedback. Online tools, including quizzes, surveys, and discussion boards, offer students a platform for instant assessment of their comprehension of course material. This real-time feedback loop is invaluable, as it enables students to pinpoint areas where further study or clarification is required, facilitating a more customized and effective learning journey. In essence, the synergy between peer-to-peer education and digital media is reshaping the educational landscape. As students harness the power of these tools, they are empowered to take ownership of their learning experiences, collaboratively explore diverse perspectives, and continually refine their understanding of the subject matter. The fusion of peer-driven learning and digital technology has ushered in an exciting era where education is not bound by geographical constraints but is instead a border less realm of knowledge sharing and discovery.

When opportunity knocks, open the door

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This topic may sound cliché, but it applies to describe my experience of three-year conducting PhD study in Poland. The were two possible ways for me to choose back then, going for a pure-typical psychology degree close to home, or getting an interdisciplinary of psychology and economics in which requires me to learn some maths and coding far away in Poland. I chose the later and I believe this would be one of the best decisions I made in my life. The first two-years was difficult, as expected. I had to work very hard to catch-up materials that I have never know in my life before. But I must admit the third and last year (now) I feel much more confident in reading papers, writing my own scripts, running the analysis and write the papers. More importantly, by working in this area I am exposed to colleagues who are doing subjects which supports my work, like in economics, statistics, and maths. This open lots of opportunities for us to establish joint work and then collaborate in making projects. This new field of science has never cross to my mind that I will ever be doing in my lifetime. Ask me four years ago, I would not even dare to dream of doing Python and R in computer vision topic. And yet, not it becomes my dissertation topic. As the AI field is rapidly growing even more now, I think the next project for me would be the psychology of AI.

How to still be in love in science in times of points and rankings

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In today's academic landscape dominated by metrics and rankings, preserving our innate love for scientific exploration is vital. In response to this emphasis on quantitative evaluation, we offer strategies to fortify our commitment to knowledge pursuit. First, rekindling our innate curiosity should be central. Our scientific journey began with a profound desire to unravel the mysteries of the natural world. We must maintain this curiosity as a perpetual source of inspiration. Shifting focus from mere academic achievements to embracing the joy of scientific discovery is paramount. While metrics matter, the process of learning and inquiry often yields the most profound insights. Mentorship and collaboration remain essential. Engaging with mentors and like-minded peers who share our commitment to scientific values provides invaluable support. In research, align objectives with genuine interests, not just for points or citations. Authenticity in research sustains enthusiasm and dedication. Lastly, recognize the real-world impact of our work. Contributions to health, the environment, or technology carry profound significance, reigniting our enthusiasm. In summary, despite an era dominated by quantitative metrics, scientists can sustain their love for science by nurturing curiosity, celebrating the scientific journey, fostering collaborations, staying true to research passions, and acknowledging the impact of their work. Together, we navigate challenges and draw inspiration from science's limitless possibilities.

The efficacy of a Framework Convention in regulating the refugee definition

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The paper draws on a doctrinal premise to address the issue of persons fleeing their country of origin because of economic hardship. It argues for a Framework Convention as a plausible solution to tackle the plight of 'economic refugees' who are arguably a direct result of globalization and the latent effects of economic liberalization. The empirical claim is that economic liberalization has become a serious form of economic persecution which international refugee law should consider when assessing asylum claims. 'Economic refugees' are not only labelled as undeserving, but also not entitled to legal protection as refugees and yet most refugees and asylum seekers hail from countries where economic failure, political instability, poverty, and persecution are indissolubly linked. Considering the predicament of such persons has not been adequately addressed by the Convention Relating to the Status of Refugees of 1951 and its Protocol of 31 January 1967, the paper asks the question 'how should international refugee law consider the situation of persons fleeing their country of origin due to economic hardship?' The question is answered by proposing a Framework Protocol/Convention that has an expanded refugee definition that considers the current realities of economic liberalization. While the Framework Convention has been effective in the regulation of environmental affairs, the paper argues that the same tool is a novel and viable solution in redefining the refugee definition so that it is inclusive and matches the current realities of systemic economic deprivation giving rise to cross-border displacement.

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PROGRAMME

DAY 1

room 30a, Adama Mickiewicza 16a street GEOCENTRUM US

9.00AM-10.00AM	Education, solidarity and social sustainability: in search of a new model of knowledge as common good *Dr Maciej Kowalewski, Assoc. Prof.*
10.00AM-12.00PM	How to still be in love in science in times of points and rankings *Dr Paulina Niedźwiedzka-Rystwej, Assoc. Prof.*
12.00PM-02.00PM	Green isn't always sustainable *Prof. Dr Oláh Judit*
02.00PM-03.00PM	**Break**
03.00PM-05.00PM	Principles of Transparency & Best Practices in Scholarly Publishing *Prof. Dr Yuriy Bilan*

DAY 2

room 111, Adama Mickiewicza 16 street

9.00AM-11.00AM	Co-creation Strategy and Its Dual Impact on Education Quality and Marketing: A Contemporary Issue in Higher Educations | Prof. *Dr. oec. HSG. Syarifa Hanoum, S.T., M.T., CSEP*
11.00AM-02.00PM	Sustainability awareness for scientists *mgr Kelaniyage Shihan Dilruk Fernando*
02.00PM-03.00PM	**Break**
03.00PM-05.00PM	How design thinking can turn your strategy into reality – managing ideas *Dr Jarosław Korpysa, Assoc. Prof.*

Principles of Transparency and Best Practices in Scholarly Publishing

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The author of a scientific article is a person or persons who participate in writing the work, i.e., in editing its content, in its scientific design, in collecting materials, and in analyzing and interpreting the results. One of the growing concerns in the academic environment in terms of authoring scientific articles is the so-called ghost writer. Some hire staff who specialize in writing scientific papers, then try to get these papers published by reputable researchers who usually have made no significant contribution to the paper (guest authors). People who make a significant contribution to the first manuscript but do not appear among the authors are known as ghost authors, the use of which violates the ethical principles of article writing. In many of these articles, it is not possible to identify the person or persons responsible for the research or publication. If the person responsible for this analysis remains anonymous and does not appear among the authors, it will be very difficult for the reader to trust the findings and results of the research. As a result, this practice violates a fundamental principle that exists between authors and readers, which is that the names of the authors appearing in the article are the real authors, and furthermore, these names indicate where the articles came from. The authors must ensure that the contributions of all individuals who in some way influenced the research process are adequately reflected. Also, the names of all the people who contributed significantly to the research and writing of the article are mentioned, and the contribution of each author is specified.

Are Green Technologies Sustainable? Perspective of The Emerging Radiation (Non-Thermal) Based Surface Treatment Technologies

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The major problems associated with fruits and vegetables are quality degradation, microbial spoilage, and postharvest disease infection, resulting in quality and nutritional losses and a short storage life. Postharvest handling is a crucial step in maintaining the quality of fresh produce. However, traditional methods, such as applying chemical treatments to reduce microbial growth and inhibit postharvest diseases, may cause chemical residue when overused, and chemical methods cannot be applied to organic produce. Many new innovative green postharvest technologies based on irradiation, such as UV-C, gamma, and X-ray irradiation, are being developed. Despite being considered a greener technology, it is reported that irradiation technology involves high-energy photons, which alter cellular physiology in crops. Reports depict irradiated foods can lose between 2% and 95% of their vitamins. Irradiation also doubles the amount of trans fats in beef. Radiation induces alteration by creating substances called "unique radiolytic products." These irradiation by-products include a variety of mutagens, substances that can cause gene mutations, polyploidy, chromosome aberrations, and dominant lethal mutations in human cells. Research also shows that irradiation forms volatile toxic chemicals such as benzene and toluene, chemicals suspected to cause cancer and birth defects. High acrylamide content is also reported in irradiated foods, which is a potential cause of cancer. Consequently, while irradiation holds promise as an eco-friendly postharvest solution, the intricate interplay

between its benefits and potential pitfalls necessitates continued exploration toward technological improvement of irradiation technologies, to ensure the safety and wholesomeness of our food supply.

Digital Media in Didactic Work

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Modern education is fundamentally changed by the use of digital media, which changes the didactic process. Technology-based digital media has completely changed how people teach and learn. Through multimedia presentations, interactive simulations, and internet resources, it accommodates various learning styles. This personalization increases student autonomy while improving comprehension.

An additional benefit of digital media is global connectedness. It encourages collaboration and cross-cultural interchange among instructors globally, broadening students' perspectives. The availability of internet resources encourages teachers to supplement their lesson plans with a variety of resources, democratizing education. Digital media encourages collaborative and active learning. Discussion boards, online classes, and group projects foster communication, teamwork, and critical thinking.

In conclusion, the use of digital media into didactic work allows for personalized, connected to the world, and interactive learning experiences. Teachers are ready to give kids the information and skills they need to function in a globally linked environment.

The Dual Responsibility of Scientists: Writing and Reviewing Papers as a Contribution to the Scientific Knowledge

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Our understanding of the world and development of the scientific knowledge relies on scientific research and publications. Scientists hold the responsibility of documenting their findings by writing papers and evaluating the quality of the knowledge through peer review. The accurate and transparent publication of the research ensures the ethical aspect of scientific work. The scientific paper should be communicated in a way that allows other scientists to replicate presented study and confirm or deny existing hypothesis. Therefore, it is important to document all methodologies in detail, honestly report results, and allow access to unprocessed data for verification if needed. Moreover, there is an ethical duty of scientists to actively participate in the process of peer review which serves as the gatekeeper of scientific quality and integrity of the knowledge. The collective efforts of reviewers validate the research submission, mark its significance and compliance with ethical standards, and allow the scientific publication to be reliable. Active involvement in peer review not only ensures quality of the knowledge but deepens the understanding and expertise of the reviewer in the research field. Balancing the research, teaching, and reviewing responsibilities for scientists in academia could be challenging, yet essential to evolve scientific knowledge. These responsibilities are crucial for scientific progress and ethical imperatives. By actively engaging in both aspects of the publishing process, scientists can ensure the continued advancement of scientific knowledge for the betterment of society.

Sustainability in Green Initiatives: "Rethinking the 'Green' Paradigm"

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In the current global context of intensified environmental awareness, the widespread implementation of green solutions is indisputably a prominent strategy for addressing pressing ecological challenges. Nonetheless, a critical view is indispensable when evaluating the prevailing belief that green inherently equates to sustainability. This comprehensive line of reasoning accentuates the necessity of a rigorous assessment of the commonly held belief in the intrinsic sustainability of green initiatives. Whilst green technologies and practices undoubtedly hold promise for mitigating specific environmental issues, they often fall short of reaching long-term, genuine sustainability. This failure to achieve genuine sustainability stems from several essential oversights. First, the phenomenon of rebound impacts, where the gains in efficiency attributed to green technologies can paradoxically lead to increased consumption, counteracting intended environmental benefits. Second, the inclination for green solutions to lessen environmental impacts in one area while shifting incumbrances to other ecosystems or communities, thereby conflicting with core sustainability principles. Third, the persistent debate of greenwashing, where products or practices are misleadingly presented as sustainable, which not only misguides consumers but also impedes realistic sustainability endeavours. Lastly, a narrow focus on green technology, detached from considerations of equitable distribution and intergenerational ethics, remains inherently unsustainable within the broader ethical context. This resolute stance emphasizes the imperative of avoiding unwarranted conflation of green with sustainability and calls for a transformative shift in perspective, demanding thorough scrutiny of green solutions, acknowledgment of their limitations, and a steadfast commitment to a holistic vision of sustainability.

Sustainability awareness for scientists: Insect as the sustainable protein source in Europe

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Consuming animal meat-based products as the source of protein has been linked to the high carbon footprint. In order to achieve the Sustainable Development Goals and to limit the climate change, the sustainable protein sources could play an important role. Other than plant-based protein, edible insects as a sustainable protein source especially in Europe have been developed. It requires 50-90% less land in comparison to the conventional livestock which produces 100 times less greenhouse gas emissions. Furthermore, the insects can be fed by the organic waste, such as food waste, which is then more sustainable. Unfortunately, in a report by European Institute of Innovation and Technology (EIT Food), it was found that only 37% of European consumers are open to adopting new foods, in this case, for example, insect-based food. The government and scientists may take an important role to increase this number, so that there will be more consumer acceptance on insect-based foods in Europe. Some actions could be considered, for examples, but is not limited to a) involving insect as a promising alternative of protein source in the food regulations based on recent scientific studies, b) involving local farmers to farming the insects, c) introducing the insect-based foods in educational system, and d) supporting food security by adding more protein alternatives. To sum

up, insect-based foods are potential and may contribute to the circular economy and support sustainability in the future.

Unmasking the Illusion: When Green Isn't Always Sustainable

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The pursuit of sustainability has taken center stage in our global agenda, with "green" practices often considered the gold standard for environmentally responsible living. However, it is crucial to acknowledge that the mere presence of "green" does not guarantee true sustainability. This abstract delves into the intricate web of factors that demonstrate how what appears environmentally friendly on the surface may, in fact, be masking unsustainable practices underneath.

While green initiatives such as renewable energy, electric vehicles, and biodegradable products are touted as eco-friendly solutions, they may inadvertently contribute to hidden ecological and social costs. The concept of "greenwashing" is a prime example, where companies exploit the demand for sustainability by superficially adopting green labels without substantial changes to their underlying practices. This not only misleads consumers but also hinders the progress toward genuine sustainability.

Furthermore, the green race can sometimes divert attention from more sustainable alternatives. In our quest for quick fixes, we may overlook long-term solutions that address the root causes of environmental issues, such as overconsumption and resource depletion. An excessive focus on green technologies may perpetuate a mindset of unchecked growth rather than fostering a culture of conservation and responsible resource use.

To truly achieve sustainability, we must look beyond the surface and critically evaluate the entire life cycle of products, technologies, and practices. Sustainable solutions should prioritize the reduction of overall environmental and social impacts, rather than simply adopting green aesthetics. This abstract calls for a more holistic approach to sustainability, one that goes beyond the allure of "green" and seeks to address the complex interplay of economic, environmental, and social factors to create a truly sustainable future.

Green isn’t always sustainable

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The sustainability topic has emerged in this past decade. With the increasing need to leave the earth in the same condition for future generations, various ways have been conducted to stay green and shift from non-environmentally friendly products to environmentally friendly ones. Take the example from the decreasing use of fossil fuels, stopping deforestation, promoting the tradition of recycling, reusing, and reducing, minimizing the impact of global warming, and many more.

To encourage sustainability, countries around the world started to shift their regulation to support the aims, for example: Europe has stated its Green Deal Regulation. Following that, the movement from the linear economy which creates more damage to the ecosystem and biodiversity, and depletion of natural resources, to the circular economy which promotes the design of waste and pollution, keeps products and materials in

use and regenerates natural systems has been started. We can see recently, more and more businesses both local and international business adopted a circular business model.

However, the good intention of sustainability is being used in negative ways by some big companies. The slogan of greenwashing becomes a normal term to describe the fraud companies do to ensure customers that they are environmentally friendly businesses. Moreover, since green marketing has increased its popularity, companies have started to use the same slogan in their businesses with the main and only aim of gaining more customers. Hence, customers have to notice and pay more careful attention to which companies carry the value of sustainability and which one is only for advertising.

Towards Ethical Science: Introducing Sustainability Awareness among Researchers and Engineers

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Sustainability has emerged as a crucial objective for humanity, intimately linked with ethics, which serves as a compass for ethically sound decision-making in addressing sustainability challenges holistically. The significance of ethics in the context of sustainability lies in the necessity to fundamentally reshape the collective outlook of researchers and engineers toward the natural world. This transformation, while challenging due to deeply ingrained preconceptions and entrenched mindsets, is imperative. Furthermore, ethics holds a paramount role in ensuring scientific integrity, upholding human rights and dignity, and fostering collaboration between the scientific community and society at large. As a general principle, ethics should permeate each of the three foundational pillars of sustainability, ensuring its presence throughout collaborative decision-making processes. These pillars encompass the realms of the environment, society, and the economy. Environmental ethics is centred on assessing the intrinsic worth of the non-human natural world and discerning the ethical correctness of human conduct within natural ecosystems. Social ethics within the realm of sustainability focus on appraising the values, actions, and behaviours of individuals or groups, with relevance to the principles and guidelines governing societal well-being. Lastly, economic ethics in sustainability aims to guarantee that the production of goods aligns with the broader principles and objectives of sustainability. These pillars urge the scientific and engineering communities to prioritize ethical considerations and sustainability awareness, fostering a culture of responsible and impactful innovation. Through education, collaboration, and global engagement, researchers and engineers can lead the way towards a more sustainable and ethical future.

The role of educators in societal transformation for a sustainable future

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One of the roles that we can observe in the priorities set by Education for Sustainable Development 2030 (ESD) pertains to building the capacity of educators. Educators are encouraged to acquire contextual expertise in developing their knowledge, skills, values, and attitudes, enabling them to impact locally, nationally, and globally. With these capabilities, educators can assist learners in acquiring the necessary knowledge, skills, values, and attitudes to make informed decisions and take responsible actions, fostering an inclusive society

that empowers individuals of all genders for present and future generations while respecting cultural diversity.

Moreover, educators are expected to be creative teachers, utilizing interactive methods like project-based learning in their classrooms and mentorship centered on pedagogy. They are also tasked with transforming various facets of learning and the social environment.

According to data from ESD, as many as 20% of countries in Asia and the Pacific have yet to align with UNESCO's recommendations concerning education policy, teacher education, and curricula between 2012 and 2016. This data underscores the need for a holistic approach encompassing learning content, pedagogy, and learning outcomes to instigate a fundamental behavioral shift toward sustainable development.

Several steps are necessary to motivate learners to undertake transformative actions for sustainability and shape a different future. These steps include ensuring that individuals can comprehend sustainability challenges and raising awareness of the link between reality and the actions taken to effect change in their surroundings. Therefore, this new opportunity requires support to facilitate transformation in the field of education as well.

Green isn't always sustainable

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This session titled "Green isn't always sustainable" was carried out by Prof. Dr. Judit Oláh during conference "When opportunity knocks, open the door", which was a part of the international summer school program, arranged by "The Doctoral School of The University of Szczecin". Various topics related to global population growth, food production, resource depletion, climate change, and the concept of the circular bio economy. The discussion started by highlighting the projected increase in global population, reaching 9 billion people by 2040, and the challenges this will pose in terms of limited biocapacity and changes in dietary habits. The impact of population growth on deforestation is also discussed, with shifting cultivation for agriculture identified as a major cause. The concept of the circular bio economy is introduced as an intersection between the circular economy and the bio economy, focusing on the sustainable use of renewable biological resources and the conversion of waste into value-added products. The benefits of circular bioeconomic strategies, such as using bio-based inputs, resource recovery and recycling, product life extension, sharing platforms, and defossilization of major industries, are discussed. Thus, the role of research and innovation in biomass production and valorization was emphasized, and also the potential of the circular bio economy to address challenges such as climate change, biodiversity loss, and resource depletion was denoted. The discussion was concluded by emphasizing the importance of integrating circular economy principles, digitalization, and competitiveness in order to achieve sustainable development goals and create a climate-neutral and resource-efficient economy. Overall, the take home message was highlighted as the potential of circular bioeconomic strategies to promote environmental sustainability and contribute to economic growth and wellbeing.

Understanding the Perspectives and Realities of Students with Disabilities in Indonesian Higher Education: Case study from Universitas Negeri Surabaya

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The implementation of inclusive education for students with disabilities at Indonesian higher education level, particularly at Universitas Negeri Surabaya, encounters numerous challenges. These challenges include academic difficulties arising from physical barriers, socio-cultural obstacles, discrimination, and stigmatization. This research employs a qualitative case study approach to explore how disabled students perceive and experience these challenges at Universitas Negeri Surabaya. Semi-structured interviews were conducted with fifteen students who have various disabilities such as deafness, blindness, physical disabilities, autism, quadriplegia, or cerebral palsy, using Zoom. Through thematic analysis, three primary concerns emerged: the need for accommodations, opportunities for socialization, and the availability of university resources. Despite some advancements, students still encounter obstacles in pursuing higher education. This study highlights the necessity of policy reforms and the support of the academic community to foster inclusive education for students with disabilities at Universitas Negeri Surabaya in Indonesia.

Circular economy implementation in food research: utilization of berry by-products in edible oil industry

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In respect to the circular economy movement in European Union, food industries are encouraged to reduce the environmental impact from their production scheme. Berry seed oil (BSO) is the valorised goods from the by-products of berry processing. Berry seeds contain 15-18% of oil yield with high nutritional properties that often linked to cardioprotective properties. The demand for BSO as food supplement, nutraceutical, and cosmetic products were observed in the recent years. The progressive movement towards sustainable BSO production may support the circular economy implementation under the European Green Deal framework. In contrast to the growing interest, the consumer remains unprotected from possible fraud because there is no enforceable regulation to control the quality and the authenticity of BSO. Furthermore, the knowledge about BSO natural characteristics were lacking, which may slowing down the initiative for niche oil's regulation development. To tackle the emerging problems in BSO production, comprehensive studies about the natural variation of BSO are necessary to be conducted. The study covered: 1) the purity evaluation of BSO sold in EU market, 2) the characteristics of BSO extracted from different procedures, 3) the evaluation of the proposed purity standard for BSO. The studies may support the development of regulatory standard for niche oils like BSO. Furthermore, it supports the circular economy implementation by expanding the knowledge about green technology and by-products valorisation to reach the long-term European Grean Deal's goal.

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