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Applications of Multifunctional Nanomaterials

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Chapter 3 - Rare earth doped BiFeO₃ multiferroic system: optical, dielectric, and magnetoelectric coupling properties and applications

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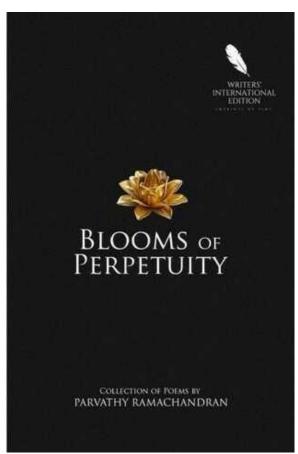
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Abstract

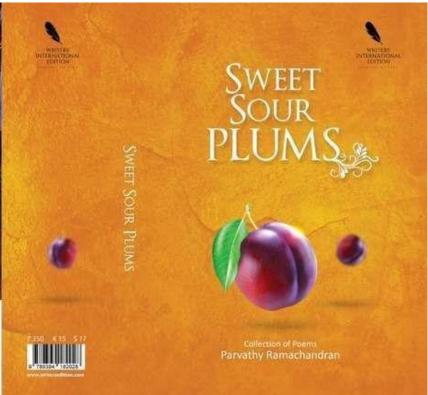
This chapter describes the optical, dielectric, and magneto-electric coupling applications of undoped and rare Earth (RE=Eu3+) doped Bi1-xEuxFeO3 (x=0, 0.01, and 0.02) multiferroic systems, which are successfully synthesized by sol-gel method. Doping of rare-earth ions at the Bi3+ site reduced the crystallite size and the unit cell volume of the bismuth ferrite sample and was studied using X-ray diffraction analysis. It disrupted the cycloidal spin structure (with \(\lambda \sim 70 \) nm) of the BiFeO₃ system and enhanced the magnetic and multiferroic properties of the synthesized samples. The doping also enhanced the optical properties by reducing the band gap energy, which has a great application in the field of photovoltaic devices. This reveals the reduction of energy gap between the oxygen-2p valence band and the Iron-3d conduction band. Rare earth doping enhanced its dielectric properties since more space charges formed in the systems. The rare earth doping increases the dielectric constant (e'), dielectric leakage (e'') and the magneto electric coupling coefficient (ag) of the prepared material. This suggests that the synthesized material is a good candidate for sensors, transducers, spintronics, and ferroelectric nonvolatile memory applications.

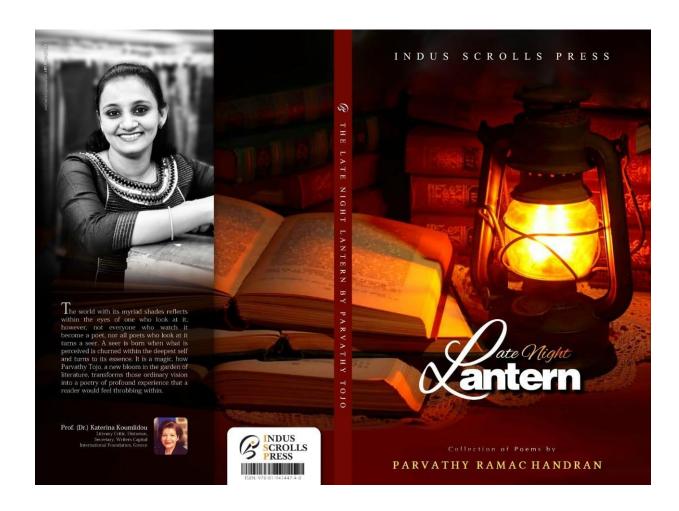






Writer and academician Parvathy Ramachanidran's poems mirror the complex world we are living in She published her debut, arthology Livia Night Landern Feshuring poems on varied subjects such as 16e. Ner impossible possibilities, motherhood, sacide, and marriage, whereas the second book Blooms of Perpetuity is yet another example of her poetic marvet. Among the erood promising non-native English withers, she has got a place.



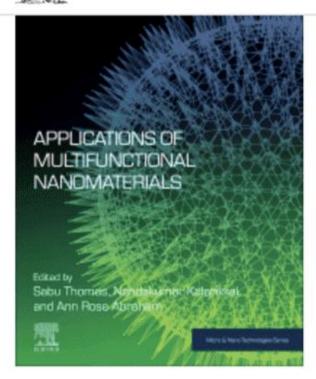












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A Study on Post Covid Era of Medical Tourism Sector of Kerala

Dr.A. Nishad, Assistant Professor, Department of Commerce, Sree Narayana College, Chengannur, Kerala,
India.

ABSTRACT: Medical tourism is synonymy called health tourism and wellness tourism, is a factor that has risen from the fast growth of an industry where people from various countries are traveling to other countries to avail medical, cosmetic treatment, as well as surgical care while at the same time visiting, vacationing, and experiencing the uniqueness of the countries that they are visiting. The current COVID 19 crisis shows us that peoples in the countries had lost a necessary relation between humans and their habitats. Precisely considering the ecological health in which humans stays healthy only if they conduct their activities within the physical limits that guarantees the health of hionetworks. In many ways world health systems provides amainbase for the post-COVID19 development model. Afterward this COVID 19 situation all the countries of worldwide will be in a renovation stage in all the sectors. The extreme impact of this transformation is on the economy and businesses. This transformation will also have a major effect on tourism, especially Medical tourism. This is also a serious threat to medical tourism, which is integrally the practice of determining and encountering the unfamiliar, therefore, tourism will now be connected with a kind of unseen and slight fear by many people who have practiced isolation in these pandemic period. Remaining in home and taking continuous self-care may developed a more powerful routine choice than in the past, when it was considered going out and hang around in different geographies was better for human health. Travel restraints and nortal distancing will reduce the number of customers and make them more economical. At the same time, business injustments will be severely limited. Considering the case of Kerala's medical tourism sector, majority of the tourist are from outside the country and this type of travel restrictions and impact on the economy will severely affect the future of Kerala's medical tourism sector. In post COVID 19 era, people all over the world are going to be in a situation that for fundamental and basic needs will be considered in their routine life and leisure activity like tourism and all well be considered after certain period only. This type of attitude changes also going to inversely affect development of Kerala's medical tourism.

KEYWORDS: Medical tourism. Post Covid, Kerala.

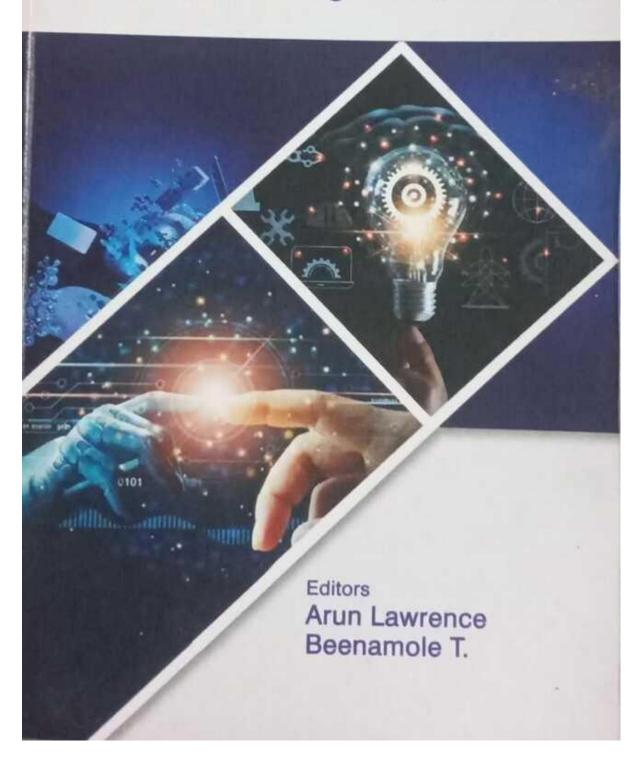
1. Introduction

India's Medical tourism is a major sources of income provider industrial sector and becomes the reason for lakhs of foreigners and citizens to visit tradition of the India and enjoy the treatment services of traditional culture. Kerala, India's one of the state which is full of well trained, educated and experienced medical service professionals and doctors. Advantages of availing medical tourism in Kerala Include low costs, the availability of sophisticated medical technologies, and a growing needs o international quality standards, as well as the fact that foreign medical tourists are less likely to encounter a language related problem in Kerala. Many of the health care professionals have earned their professional degrees from reputed institutions in India and abroad and having more years of experience in the medial tourism field. Kerala's medical tourism industry is seen as one of the fastest growing and developing area in Today's developing India.

Kerala is considered as 'God's Own Country' as its slogan suggests, has established healthcare in India for tourists.

The main points of Kerala in the area of medical tourism are traditional treatments as well as most modern medical treatments and the touring facilities. The major advantages are cost effectiveness and the better treatment facilities. Medical tourism in Kerala offers medicinal service packages with yoga, ayurvedic treatments, medication, allopathic

Disruptive Technology and Business: Emerging Challenges and Models



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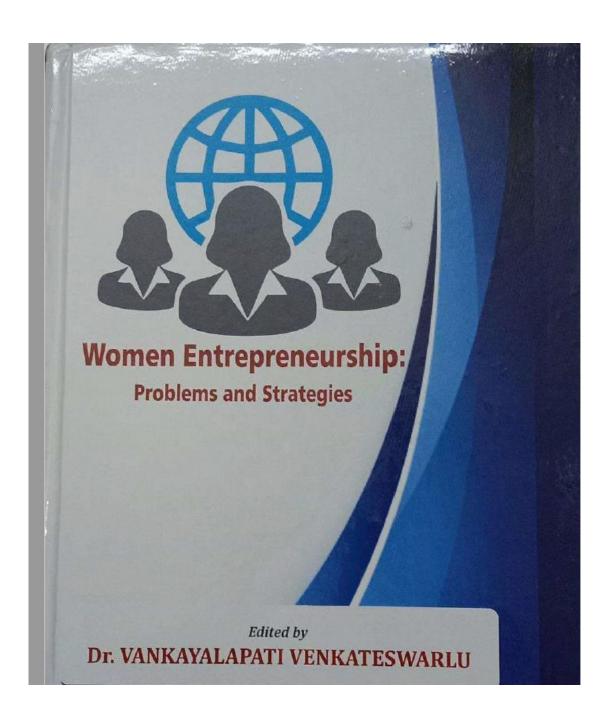
BUSINESS EDUCATION IN THE AGE OF DISRUPTIONS -A SPECIAL REFERENCE TO ENGINEERING GRADUATES IN TRIVANDRUM CITY

Dr Nishad A.

Introduction

India's current economic crisis has resulted in shockingly high jobless rates due to the current disruptive pandemic situation. The business education sector is not immune to the pandemic, and it is grappling with severe learning and teaching issues. The covid-19 pandemic had a significant impact on people's lives and economies around the world. They are posing several issues for the individual, public, and business institutions. Globally, massive quarantines have been imposed, effectively halting most human contact, a phenomenon known as social distance. However, social distancing entails a reduction in human physical interaction. Business schools are fixed with a slew of severe short-term issues that could jeopardize their very existence.

Because of the significantly higher number of students studying business at both the undergraduate and postgraduate levels than other disciplines, and because of the expected value in the business degrees, which generally carry higher forces than other courses, this has been a serious concern for business academics. A possible decrease in students who are not interested in continuing their study after completing their engineering degree studies has highlighted the importance of motivation in running a firm, prompting some to wonder if teaching can help this motivation arise. Others, on the other hand, believe that special entrepreneurship education can help generate entrepreneurial motivation. As more people turn to online learning, blended and more accessible types of education may become more popular, helping to foster lifelong learning. Despite the fact that



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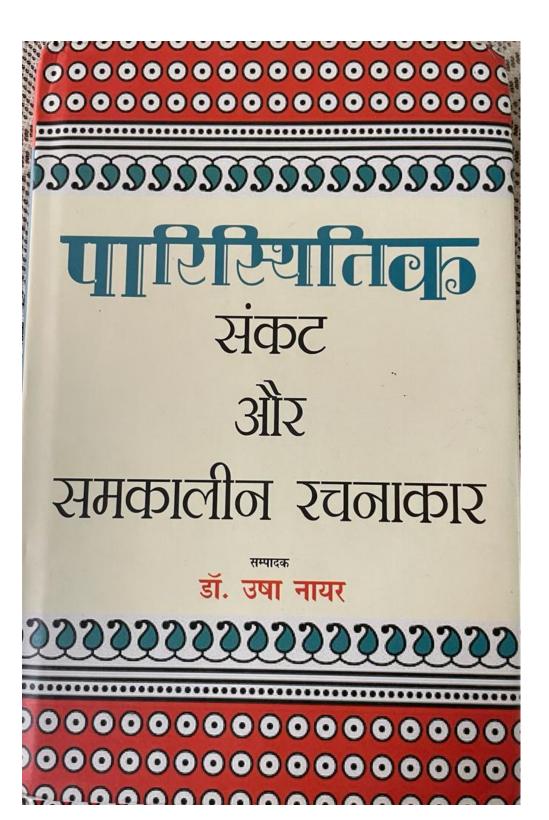
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1. INTRODUCTION

RODUCTION

The entrepreneurship demonstrates the way to women freedom and The entrepreneurship defined aspirations for a superior expectation for thusly satisfies the prerequisites and aspirations for a superior expectation for thusly satisfies the prerequisites and aspect their restriction and lean toward everyday comforts. These days, women have left their restriction and lean toward everyday comforts. These days, troud occupations with their family and money taking self-situated employments and occupations with their family and money related help and modern direction. At the same time alongside the method of entrepreneurship, women need to confront different issues identified with entrepreneurship and these issues heap up in view of their double jobs as bread workers and homemakers. To change this circumstance an alternate introduction is required in this area and an out and out various perspective is basic for the rising women business people that must be founded on a comprehension of the nuances of individual behavior. The progressively inconspicuous change is social: increment in proficiency levels, more noteworthy customer mindfulness, upgraded media entrance, and fundamental changes in family structure. Keeping with the requests for more noteworthy advancement in Indian undertakings, a few have on a very basic level upgraded structures. Entrepreneurship reaches out past a regular business and monetary point of view. Imagination, development and breathing life into a dream are to such an extent, there has been an overflowing of women in key jobs. They are sharp to break the ties of customary jobs and can take up new and equipped jobs to perform well in new segments. In spite of the fact that they confront the different issues, yet they are equipped for propelling themselves in each one of those jobs which were typically male prevailing. Consequently in this present time of social change and advancement, it is huge to consider women entrepreneurship and how it tends to be supported further.

As far as advancement of aptitude, women are blocked by their absence of portability, low proficiency levels and one-sided frame of mind towards other ladies. At the point when a women entrepreneurs with budgetary issues with banks and government authorities, she is regularly ousted by her locale for being 'excessively forward'. The Government and the bank authorities additionally have preferential and generalizations thoughts regarding ladies and their ability as entrepreneurs. To change this reasoning, an alternate introduction is required part and a by and large extraordinary perspective is fundamental for the developing ladies business people dependent on a comprehension of the nuances of an





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इस पुस्तक के किसी भी अंश को किसी भी माध्यम में प्रयोग करने के लिए प्रकाशक से लिखित अनुमित लेना अनिवार्य है।

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डॉ. वी. श्रीरंजिनी

आधुनिक मानव की दृष्टि केवल अर्थ और लाभ पर केन्द्रित है। मानवीय संवेदनाओं से विहीन मनुष्यों में न आपसी प्रेम है और न प्रकृति—प्रेम। समकालीन कवि इस परिवेश से अत्यन्त दुःखी हैं। इसलिए वे कविताओं के जिए प्रकृति में होने वाले अत्याचारों तथा शोषण के प्रति गहरा दुःख एवं आशंका प्रकट करते हैं। वे अपना प्रतिरोध भी दर्ज करते हैं।

आदिवासी प्रकृति की गोद में जन्मा एवं पला हुआ है लेकिन उन्हें विकास के नाम पर ज़मीनों, जंगलों, संसाधनों एवं गाँवों से बेदख़ल किया जा रहा है। वे अपनी परम्पराओं, जीवन शैली और जीवन के लिए आर्थिक संसाधनों और उसके नियन्त्रित उपभोग की महत्ता समझते हैं। समकालीन आदिवासी कवि उन्हें मनुष्य एवं प्रकृति के असन्तुलित अवस्था की ओर सचेत करते हैं। निर्मला पुतुल आदिवासियों से कई सवाल करती हैं—

"कुल्हाड़ियों के वार सहते / किसी पेड़ की हिलती टहनियों में दिखाई पड़े हैं तुम्हें / बचाव के लिए पुकारते हज़ारों हज़ार हाथ? सुना है कभी / रात के सन्नाटे में / अन्धेरे में मुँह ढाँप किस कदर रोती हैं निदयाँ / भाग – दौड़ की ज़िन्दगी से थोडा – सा वक़्त चुराकर / बितयात है कभी कभी शिकायत न करने वाली / गुमसुम बूढ़ी पृथ्वी से उसका दुख?" 1

समस्त मानव जाति धरती पर हो रहे जलवायु परिवर्तन के लिए जिम्मेदार है। हम जैसे—जैसे विकास के सोपना चढ़ रहे हैं, पृथ्वी पर नये—नये ख़तरे उत्पन्न हो रहे हैं। अधिकारियों और ठेकेदारों ने मिलकर जंगल को लाभ की वस्तु बना दिया है। अल्पलाभ के लिए मनुष्य सम्पूर्ण

Chapter 4 Cellulose Based Green Adsorbents for Pollutant Removal from Wastewater



Anitha George Varghese, Sherely Annie Paul, and M. S. Latha

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Abstract Water pollution is a major problem affecting people across the world. Heavy metals and dyes are major pollutants that pose potential threat to the health of humans and ecosystems. Several treatment technologies are available to reduce the pollutant concentration in water and wastewater. However, many of these processes are costly, have high energy requirements and generate toxic sludge and wastes that need to be carefully disposed. Addressing these problems invoked the need for green methods that are more efficient, cost effective and environment friendly for water purification. Adsorption is regarded as a green, clean and versatile method for wastewater treatment. Cellulose based materials attained considerable

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