



## African Journal of Biological Sciences

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Research Paper

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### Healing effects of alcoholic extract of white pomegranate seeds and zinc oxide nanoparticles on skin wound healing

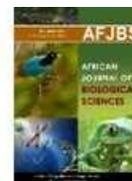
1- Ms. Priya Mohammadi [divar71@yahoo.com](mailto:divar71@yahoo.com)

2- Mr. Ali Rezaie arezaie1@gmail.com

#### Abstract

The skin is a barrier between the human body and the external environment and protects the body against external chemical and physical factors. It participates in metabolic processes, performs reabsorption and heat regulation, and is the first line of defense against pathogenic microorganisms. Wounds are physical injuries that lead to the opening or tearing of the skin and can cause physical disorders. and become functional. Wound healing is a dynamic and natural biological process in the body that includes four planned and overlapping stages of homeostasis, inflammation, reproduction and regeneration. Many drugs available for wound management and treatment, besides being expensive, also cause problems such as allergies and drug resistance. In general, medicinal plants for wound healing are cheap, affordable and safe. So that one third of all traditional medicines are used to treat wounds and skin disorders. Considering the importance of plants in wound healing, this article examines Pomegranate, which is used in wound healing.

**Keywords:** skin, wound healing, medicinal plants, pomegranate, zinc oxide nanoparticles



## Effect of Diastatic Malt Powder on Dough Rheology and Chemical Properties of Fortified White Wheat Flour

Fatemeh Gharahdaghigharahtappeh<sup>1,\*</sup>, Seyed Hadi Razavi<sup>2</sup>, Yahya Maghsoudlou<sup>3</sup>

<sup>1</sup> Head of Industries and Mechanization of Agricultural Jihad Management, Noshahr, Mazandaran, Iran

<sup>2</sup> Department of Food Science and Biotechnology Engineering, University of Tehran, Iran

<sup>3</sup> Department of Food Science and Technology, University of Gorgan, Iran

\*Email: [fqrdqr@gmail.com](mailto:fqrdqr@gmail.com)

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### ABSTRACT

*In this research, composition of flours was prepared from White wheat flour (WWE) with supplementation of diastatic malt powder (DMP) in level of @, 1, 2 and 3 percent. The effects of these treatments were measured on chemical, rheological and color. The result indicated that by increasing of the level of malt powder, water absorption and degree of softness decreased. The Highest level of moisture, crude ash, and protein was obtained in 3% of DMP whereas the lowest level of wet gluten was found in 3% of DMP. Highest score for Farinograph quality number (FQN) of composition of flours was record at 1% level of substitution. Hence it can be concluded that supplementation of DMP 1% is more suitable for fortification of WWE.*

**Keywords:** Diastatic, Dough, Farinograph, Flour, Malt powder, Rheology

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## Effect of Diastatic Malt Powder on Dough Rheology and Chemical Properties of Fortified White Wheat Flour

Fatemeh Gharahdaghigharahtappeh<sup>1,\*</sup>, Seyed Hadi Razavi<sup>2</sup>, Yahya Maghsoudlou<sup>3</sup>

<sup>1</sup> Head of Industries and Mechanization of Agricultural Jihad Management, Noshahr, Mazandaran, Iran

<sup>2</sup> Department of Food Science and Biotechnology Engineering, University of Tehran, Iran

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\*Email: [fqrdqr@gmail.com](mailto:fqrdqr@gmail.com)

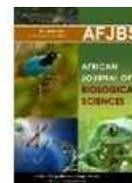
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### ABSTRACT

*In this research, composition of flours was prepared from White wheat flour (WWE) with supplementation of diastatic malt powder (DMP) in level of @, 1, 2 and 3 percent. The effects of these treatments were measured on chemical, rheological and color. The result indicated that by increasing of the level of malt powder, water absorption and degree of softness decreased. The Highest level of moisture, crude ash, and protein was obtained in 3% of DMP whereas the lowest level of wet gluten was found in 3% of DMP. Highest score for Farinograph quality number (FQN) of composition of flours was record at 1% level of substitution. Hence it can be concluded that supplementation of DMP 1% is more suitable for fortification of WWE.*

**Keywords:** Diastatic, Dough, Farinograph, Flour, Malt powder, Rheology

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## Enhancing Cybersecurity in IoT: Defending Against Malware Attacks through Machine Learning Enabled Detection and Response

Abolfazl Omidi<sup>1</sup>, Ehsan Narimani<sup>2</sup>, <sup>3</sup>Ehsan Yazdani

<sup>1</sup>Bachelor student of Computer Engineering, Pole Dokhtar Higher Education Institute, Lorestan, Iran – [abolfazl.omidi.1380.1@gmail.com](mailto:abolfazl.omidi.1380.1@gmail.com)

<sup>2</sup>Master of Lorestan University, PHD in Computer Software, Lorestan, Iran – [drehsannarimani@gmail.com](mailto:drehsannarimani@gmail.com)

<sup>3</sup>Department of Computer Science, PHD in Computer Software, Najaf Abad, Isfahan, Iran – [ehsan.yazdani.chamzini@gmail.com](mailto:ehsan.yazdani.chamzini@gmail.com)

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### ABSTRACT

*The rapid growth of the Internet of Things (IoT) has brought about numerous benefits and opportunities for seamless communication and data exchange. However, the increasing number of IoT devices has also introduced significant security challenges, making them attractive targets for cybercriminals. Among the various threats to IoT security, malware attacks pose a severe risk, compromising the functionality and security of IoT devices and users' data. Traditional security approaches, such as signature-based methods and rule-based systems, have proven inadequate in addressing the evolving and sophisticated nature of malware attacks. Therefore, there is a need for innovative and intelligent approaches to detect and respond to malware attacks effectively.*

*This paper explores the role of machine learning in enhancing cybersecurity in IoT networks, with a specific focus on malware attack detection and response. Machine learning techniques, with their ability to learn patterns from vast amounts of data and make accurate predictions, have shown significant potential in various domains, including cybersecurity. By leveraging machine learning, IoT security systems can improve their effectiveness in detecting and mitigating malware attacks. The objectives of this study include reviewing existing literature on machine learning for IoT security, analyzing the vulnerabilities and potential impacts of malware attacks on IoT devices, exploring the application of machine learning techniques for detecting and responding to malware attacks, proposing a methodology for enhancing cybersecurity through machine learning-enabled detection and response, evaluating the effectiveness of the proposed approach through experiments, providing practical implications for industry practitioners and policymakers, and identifying future research directions.*

*Overall, this paper contributes to the body of knowledge on cybersecurity in IoT by providing insights into the effective defense against malware attacks through machine learning-enabled detection and response mechanisms. The findings highlight the importance of adopting intelligent and adaptive techniques in IoT security to overcome the limitations of traditional approaches.*

**Keywords:** *Cybersecurity, Internet of Things (IoT), Malware attacks, Machine learning, Detection and response mechanisms*

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### **Presenting the model of developing safe behavior from social networks with the approach of reducing social harm: the case study of nursing students**

**Susan Rashid Zadeh**

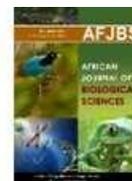
Senior expert in Community Health Nursing , Tehran Azad University of Medical Sciences

Rashidi.soosan@gmail.com

#### Abstract

are more exposed to the effects of virtual social networks due to the lack of complete socialization and the emotional nature of this group, which cannot be ignored. For this reason, the current research is investigating the design of the security development model for the use of virtual networks in schools with the approach of reducing social harm. The present research in terms of method , survey and opinion The purpose is the application . Statistics society including nursing students in Tehran, and 360 of them were selected as samples based on cluster sampling . Is. To collect information in this research, a standard questionnaire method was used and data analysis was done using SPSS software and Pearson's correlation coefficient, statistical calculations were performed to find the relationship between the variables . The results indicate that 85.3 percent of the research samples are members of virtual networks. and only 16.9 percent Membership At Telegram have not had And each student spends an average of 2 hours and 5 minutes on Telegram, and one hour on Instagram . Also, the results of the hypotheses indicate that the amount of use of virtual networks has had a direct effect on the variables of sexual deviance, drop in academic grades, absenteeism in the classroom, social isolation, but on the variables of "use of virtual networks in line with educational tools" Strengthening moral identity", "strengthening religious identity" and "strengthening national identity" have no meaningful relationship.

Keywords: virtual security network, social damage, national identity, religious identity, moral identity, security development



## Investigating the environmental effects of green steel production in the steel industry and its role in reducing CO<sub>2</sub>

Mojtaba Ebrahim Bai Salami <sup>1</sup>, <sup>1</sup> Ayub Abbasi Gravand<sup>2</sup>

<sup>1</sup> Ph.D .student in civil engineering, majoring in construction management , Fulad Sangan Mineral Industries Company [Mojtaba.ebrahimbay@gmail.com](mailto:Mojtaba.ebrahimbay@gmail.com)

<sup>2</sup>industrial engineering doctoral student, majoring in macro systems, Foulad Sangan Mineral Industries Company [Abasi.a777@gmail.com](mailto:Abasi.a777@gmail.com)

### Abstract

Steel is one of the most widely used materials in the world, which is part of the life structure of buildings , cars , infrastructures and durable consumer goods . According to the report of the International Energy Agency , steel production currently accounts for about 7 % of the annual CO<sub>2</sub> emissions in the world 's energy sector . The world demand for steel is expected to grow by 40% by 2050. Green steel includes the production of steel without the use of fossil fuels . This can be done by using low - carbon energy sources such as hydrogen , coal gasification , and electricity instead of the traditional path of carbon - intensive power plant production . Coal did .Green steel , which is produced using renewable energies and hydrogen production , is a revolutionary way to decarbonize steel production and expand the hydrogen industry .Iran , which has abundant renewable resources and iron ore reserves , is in a position to support this . It is an environmentally friendly technology . The production of green steel has important environmental and economic challenges that have been investigated in this research. Green Steel has started its production in the first green steel plant in Europe in northern Sweden. One of the methods of green steel production is the use of hydrogen to react with iron ore and produce steam or recycle raw materials . This article also provides solutions in this field.

**Keywords :** green steel; environmental effects; renewable energy; Recycling of raw materials



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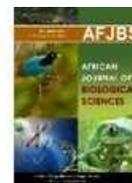
### **Investigating the effects of vitamins in nervous and mental disorders: a review article**

Mona Jahangiri, Master of Cognitive Psychology and Master of Clinical Psychology

#### **Abstract**

The purpose of this article is to investigate the effects of vitamins on reducing the symptoms of disorders, so that if they improve, they can be used in treatment protocols. Since in many researches a vitamin or a disorder is discussed, it seems that a summary of all these cases was needed so that vitamins can be used in disorders in the direction of complementary treatment. The method was as follows: A total of 75 articles were reviewed, of which only 42 articles had the necessary criteria for this research and obtained results for us. Since B vitamins are soluble in water and can be stored in the body, they must be consumed daily, and other vitamins have an effect on the effectiveness of drugs. In this study, seven groups of vitamins, including vitamins B1, B6, B12, C, A, D, E are discussed and we examined 10 common disorders in clinical psychology, including autism spectrum disorder, obsessive-compulsive disorder, bipolar disorder, hyperactivity disorder, schizophrenia, Alzheimer's, Parkinson's, depressive disorder, Anxiety disorder was post-traumatic stress disorder. The conclusion was that, in general, the group of B vitamins had the most effect, and vitamin A had the least effect, and D, E, C also had effects in some disorders, and the two disorders of autism and Alzheimer's, which are among cognitive disorders, are all vitamins for them. It was effective.

**Keywords: effects, vitamins, mental disorders**



## Evaluating the culture of health , safety and environment\* In one of the country's gas companies using the cultural ladder

Bahareh Maladavodi ,<sup>1</sup> Reza Pemeshemi Ganji.<sup>2</sup>

-1Department of Mechanical Engineering , Faculty of Technical Engineering , University of Science and Culture, Tehran, Iran . Bahar.m.davoudi@gmail.com

-2Engineer group Chemistry , Abadan Oil Faculty , University of Oil Industry , Abadan , Iran .

Q .r.prighami @put.ac.ir

### Summary

Health, safety and environment In the subsidiaries of the Ministry of Oil, it is considered as a necessary matter ; Therefore, the upcoming research in the relevant company with the purpose of evaluation , Promotion and elimination of culture defects Health, safety and environment Organization using the culture ladder Health, safety and environment done. This research is a descriptive-analytical cross-sectional and applied study. The study population is all personnel It is an official and unofficial organization that, using the guidance of professors and statistical consultants and also the type of study, the checklist of the cultural ladder questionnaire. Health , safety and environment after A library study has been prepared . In this model ,culture is classified into five levels from pathological to creative, each of which has its own unique characteristics . According to the findings of the research and self-assessment of culture health ,safety and environment, The organization is in the stage of calculation , which by taking some corrective measures and suggestions, it will soon be able to take the preventive position of the culture ladder. Health ,safety and environment and then enter the creative stage . A significant and inverse relationship between the score Finally, there is a safety culture and the claim of the managers of this organization regarding the importance of health, safety and the environment , and according to the results, necessary measures should be taken to improve the level of the culture. Health, safety and environment in the operational and administrative environment; Also, improve the performance of employees and improve the attitude of management at all levels of the organization . Therefore ,establishing a dynamic and efficient safety culture among employees and managers will facilitate the movement of the organization to achieve higher safety standards

**Keywords :**health, safety and environmental culture, culture ladder model, culture evaluation, oil and gas industries.

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\* health, safety, and environment (HSE)



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### **Examining the factors affecting the water market performance of Tabaristan Plastic Complex Company using IPA method**

**Javad Akbari\* , <sup>1</sup>Barmak Ghanbarpur<sup>2</sup>**

-1Professional doctorate student of business management ) DBA , (Industrial Management Organization , Isfahan , Iran

Akbari.TPC@gmail.com

-2Master of Management Analysis , Queen 's University , Kingston , Canada

Ghanbarpour@gmail.com

#### **Summary**

The market is a management - social process by which individuals and groups , through the production and exchange of goods , satisfy their needs and They respond to their own desires . Accurate knowledge of customers plays a fundamental role in the business success of companies , therefore , continuous monitoring of companies on the water market is essential because the water market is one of the areas of SSC is changing economically , socially and technologically and is constantly changing . In this article , the factors affecting the water market of Tabaristan Plastic Complex Company have been investigated using the IPA method.

**Keywords :** job opportunities , water market , IPA .



## An overview of the use of nanoparticles in the treatment of various urinary infections

Samere Noori,<sup>1</sup> Behrouz Atai<sup>2</sup>

<sup>1</sup>-Infectious and Tropical Diseases Research Center, Isfahan University of Medical Sciences, Isfahan, Iran  
sam.nouri82@yahoo.com

<sup>2</sup>-Infectious and Tropical Diseases Research Center, Isfahan University of Medical Sciences, Isfahan, Iran  
ataei@med.mui.ac.ir

### Summary

Nanoparticles have many advantages based on which these particles can be used to design and develop different drug delivery systems. Examples of these systems are the management of urinary tract infections. Urinary tract infections are one of the most common infections in patients. More in sections different It is a hospital. Many of these infections have become resistant to antibiotics. Various metal, silica, composite, organic and green nanoparticles have been investigated in various studies to control urinary infections and have shown significant effects. The current research is a review article written based on authentic articles published from 1999 to 2023 in the field of using nanoparticles to control and treat urinary tract infections. The database for this article is Science direct, PubMed and Google scholar.

**Keywords** :nanoparticles, urinary infection, silica



## Studying the opinion of Use of gels Branched polymer as temperature and swelling resistant fluids for water - based drilling fluids

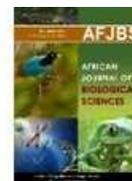
**Mohammad Hossein Asakare**

hadiasa2014@gmail.com

### Summary

the continuous exploration and development of oil and gas resources in deep formations , The use of water - based drilling fluids as a key factor faces severe challenges due to high temperatures and hydration of soil layers . Therefore, the development of reducing systems The swelling of soil resistant to heat and salt has always been considered. In this study, it has been tried to increase the hydration resistance and temperature stability of the soil by using nanoparticles modified with amine polymer branches. The mechanism of interaction between branched polymer and silica nanoparticles in different states was investigated with the help of dense functional theory in order to determine the best state of polymer connection .The amount of polymer adsorption energy in vertical and horizontal state was 280- and -360 kJ/mol, respectively. The horizontal mode prevented water from reaching the soil surface by forming strong hydrogen bonds with nanoparticles .This showed that the absorption energy was higher than other similar compounds . Calculation of the thermal stability of the polymer-nanoparticle combination showed that the thermal resistance of this combination is maintained up to temperatures higher than 280 degrees Celsius. In general, it can be seen that branched polymers are a suitable option to prevent the swelling of drilling wells.

**Keywords :** Excavator questions , nanoparticles, polymer ,theoretical study



## **Histometric and histopathological study of the healing effects of the alcoholic extract of the white seed of Pomegranate Cloud and oxide nanoparticles on skin wound healing in rats.**

**.Priya Mohammadi .Ali Rezaie .Dariush Mohajeri**

-1Ms .Priya Mohammadi and divar71@yahoo.com

- 2Mr. Ali Rezaie and arezaie1@gmail.com

-3Mr .Dariush Mohajeri and daryoushmohajeri@yahoo.com

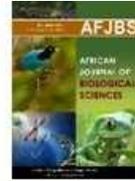
### **Summary**

wide skin The largest organ in terms of surface area in the body and has various functions. One of the most common The worst damage Infected skin, open wounds caused by cuts and injuries be One of the most important topics for researchers has always been to find a way to repair wounds. Nowadays, herbal treatment is very much studied by researchers in the field due to the possibility of side effects occurring less wound healing be Cloud pomegranate white seed extract due to its antibacterial properties. Anti-inflammatory is probably effective in wound healing. On the other hand, some studies show The anti-bacterial property of zinc oxide nanoparticles in topical application reduces contamination and infection in the wound, and re-epithelization is suggested as the most important mechanism of wound healing in this material. In this research, it was tried to evaluate the healing effects of zinc oxide nanoparticles in the form of ointment. The alcoholic extract of the white seed of Cloud Pomegranate in the form of an ointment and a combined ointment of the two should be compared to the effects of the control group and Oserin. in this study Twenty-five mice were selected and randomly divided into five treatment groups. The first group did not receive any medicine, the second group received Oserin ointment. The third group received the sieved extract of white pomegranate seeds in the form of an ointment, the fourth group received zinc oxide nanoparticles in the form of an ointment, and the fifth group received the alcoholic extract of white pomegranate seeds along with zinc oxide nanoparticles. from the wound created on zero days, Seven , fourteen, twenty one photos were taken and the healing rate of the wound was calculated. on zero days, One , Three , Seven , fourteen and twenty one mice were killed in a painless manner and samples were taken from the wounds. Check Histopathological tests on the sample plurals The healing of the wound was done. At the end of the study, the amount of mononuclear cells, multinucleated cells, fibroblast and vascularization in the fifth group was less than other groups. The process of wound contraction in the fifth group was more than other groups . Although , in the fifth and fourth groups, the process of wound contraction was more severe than the other groups.



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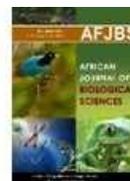


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Complete healing of the wound on the 21<sup>st</sup> day Only in the fifth group It was observed . In this study, the topical application of the extract A white pomegranate seed together with the extract of zinc oxide nanoparticles had a positive effect on the stages of wound healing in mice and therefore It may have a beneficial role in wound healing .

**Keywords :** histopathology , Wound healing , alcoholic extract of white pomegranate seeds, zinc oxide nanoparticles , Syrian mice.



## Calculation of a Definite Integral by Geometric Method

Davood Nezami Behrooz <sup>1</sup>

<sup>1</sup> Department of Mathematics, Tuyserkan Branch, Islamic Azad University, Tuyserkan, Iran

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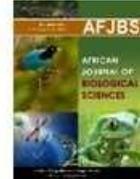
### ABSTRACT

In this article, we will calculate and compare a double integral using two polar and geometric methods.

**Keywords:** Double integral, geometric method, polar coordinates

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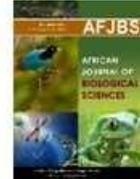
## Algorithm of life theme Without damage , from the perspective of the intellectual system of Imam Khamenei, may God bless him and grant him peace

Tayyaba Ghaemi Bafghi\*

### Abstract

This research has expressed the theme of religious life style according to the logic of Surah Mubarakah Asr by applying it to the thought system of Imam Khamenei . Surah Mubarakeh Asr considers time to be the turning point and the axis of life style and invites man to four pillars in order to fully benefit from the opportunity of worldly life. It is actually the summary of religion and the result will be the optimal use of life and management of time, freedom from losses and achieving success and prosperity . This research with a descriptive-analytical approach and library method , as described in this 4 The author has discussed from the point of view of Imam Khamenei Mudazla Al-Ali, has documented the evidences and evidences and has put forward the opinions of other thinkers as a support for the discussion. Based on the thought system of If the style and foundation of life is established based on the contents of this honorable Surah and this Algorithm is implemented, thanks to the noble teachings of the Holy Quran, human beings He will achieve his prosperity and perfection in this world and the end of his service and happiness in the hereafter.

**key words :** Lifestyle , time management, algorithm, Surah Mubarakah Asr , religion , faith , advice , patience



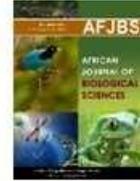
## Algorithm of religious lifestyle, based on Surah Mubarakah Asr from the perspective of Imam Khamenei's intellectual system

Tayyebeh Ghaemi bafghi\*

### Abstract

This research has expressed the algorithm of the religious lifestyle according to the logic of Surah Mubarakah Asr by applying it to the thought system of Imam Khamenei. Surah Mubarakah Asr considers time to be the turning point and the center of the lifestyle and invites man to the four pillars to fully benefit from the opportunity of worldly life, which is actually the summary of religion and the result is the optimal use of life and management. In the best way of time, it will be getting rid of losses and achieving success and prosperity. This research, with a descriptive-analytical approach and a library method, explained these 4 components from the perspective of Imam Khamenei, documented the arguments and evidence, and put forward the opinions of other thinkers as a support for the discussion. . According to his thought system, if the style and foundation of life is based on the contents of this honorable surah and this algorithm is implemented, thanks to the noble teachings of the Holy Qur'an, man will achieve his prosperity and perfection in the world. and the end of service and happiness in the world and hereafter will be achieved.

**Keywords:** lifestyle, Surah Mubarakah Asr , religion, faith, advice, patience



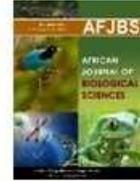
## Explanation of the comprehensive and balanced model of education Proportion of Alevi worship and justice

Tayyaba Ghaemi Bafghi\* and Sadegh Salmani†

### Summary

In Islam, the infallible imams (peace be upon them) are presented as the best example and example of humanity, and the Commander of the Faithful (peace be upon them) is presented as a comprehensive and balanced model, a standard and criterion for measuring others, and it is necessary. His lifestyle should be checked and reviewed. This research is a library approach, with a qualitative approach and a descriptive-analytical method; After examining and measuring the relationship between justice and worship in thought, The performance, behavior and speech of the Commander of the Faithful, peace be upon him. This article has tried to address the importance of how the balance of worship and justice has shaped the comprehensive model and character of Shakool Alavi to become a measure of humanity. In this regard, he is responsible for investigation Some questions were asked, including: What is the relation of worship as a behavior in the field of servant ethics to justice? How can worship bring justice to man? Or how does the existential aspect of worship affect the existential aspect of justice in humans? In order to answer these questions from an analytical and narrative point of view, with the aim of establishing a model, an attempt has been made to present examples of Alevi practical life as concrete and practical examples that show the close relationship between worship and justice. Therefore, after defining education, worship and justice, this research seeks to explain the relationship between worship and justice. Is worship effective in creating justice and justice in promoting worship? Isn't multiplicity of worship an obstacle to justice or limiting justice? What is the ratio of worship and justice in the life of Amirul Momineen (AS)? What is the relationship between the extent of the actions of Amirul Momineen (AS) for the believers and this discussion? What has distinguished his performance and worship and made his character equal and equal to justice? In the hope of Tasi, this article has made a model within the scope of scientific materials and limited opportunity.

**Key words :** education, educational model, justice, worship, life of Imam Ali (AS), worship



## Explanation of the comprehensive and balanced model in the ratiometric measurement of Alevi worship and justice

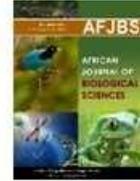
Tayyebah Ghaemi bafghi\*

Sadegh salmani

### Summary

In Islam, the infallible imams (peace be upon them) are introduced as the best example and model of humanity, and the Commander of the Faithful (peace be upon them) is presented as a comprehensive and balanced model, a standard and criterion for measuring others, and it is necessary to check and review his lifestyle. be placed This research is in a library style, with a qualitative approach and a descriptive-analytical method; It seeks to investigate and measure the relationship between justice and worship in the thought, performance, behavior and speech of Amir al- Mu'minin (peace be upon him). This article has tried to address the importance of how the balance of worship and justice has shaped the comprehensive model and character of balanced personality and measure Alawi to become a measure of humanity. In this regard, some questions have been examined, such as: What is the relation of worship as a behavior in the field of servant ethics to justice? How can worship bring justice to man? Or how does the existential aspect of worship affect the existential aspect of justice in humans? In order to answer these questions from an analytical and narrative point of view, with the aim of establishing a model, an attempt has been made to present examples of Alevi's practice as concrete and practical examples that show the bond between worship and justice. Therefore, after defining education, worship and justice, this research aims to explain. The relationship between worship and justice is whether worship is effective in creating justice and justice in promoting worship. Isn't the multiplicity of worship an obstacle to justice or restrictive justice? What is the ratio of worship and justice in the life of Amir al- Mu'minin (AS)? What is the relationship between the extent of the actions of Amir al- Mu'minin (AS) for the believers and this discussion? What has distinguished his performance and worship and made his character equal and equal to justice? In the hope of modeling, this article has taken a model within the scope of scientific knowledge and limited opportunity.

**Keywords :** Justice, worship, life of Imam Ali ( pbuh ), worship, education, educational model



## Nano Medical robots and future challenges

**Fatima Masoudi Nia\***

Assistant Professor and Academic Staff, Department of Electrical Engineering, Sufian Branch, Islamic Azad University, Sufian, Iran, [fm.masoudinia@iau.ac.ir](mailto:fm.masoudinia@iau.ac.ir)

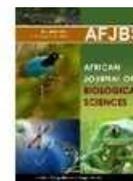
Islamic Azad University, Tabriz Branch - Robotics Research Center - Department of Computer Engineering, Robotics and Soft Technologies Research Center, Tabriz Branch, Islamic Azad University, Tabriz, Iran

### Summary

Robots – The robots are the workers of the place – It is ten that by Karl Kapek and Isaac Asimov in the play " Robot . " Rossum's World " was introduced in 1920 . This profile paved the way for the emergence of robots as a tool . The inspiration for robots can be traced back to 17th century Japan , during the Edo period , where Karakoran games were considered as robots because of their mechanical properties and their use for tasks such as making tea . And the features that are used today to describe F A device as a robot includes : actuator , sensor element ,controller and frame. The actuator provides its degrees of freedom ) DOF ( to the robot while the sensor elements measure the features of the surrounding environment . In addition , the controller makes a decision based on the input to change the state of the actuator based on the control operations . Finally , the frame contains components for security purposes.

**Keywords :** nanorobot,medicine, challenge

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## Gold Nanoparticles in Anti-Aging Interventions:

### A Comprehensive Exploration of Skin Health and Cosmeceuticals

Azita Saleshi Sichani, MSc<sup>1</sup>  
Sogol Gharooni Fard, MSc<sup>1</sup>  
Fatemehsadat Ayoub Nejad, MSc<sup>1</sup>  
Amirhosein Kordlashkenari, MSc<sup>1</sup>

**Corresponding Author:** Samila Farokhimanesh, PhD<sup>2</sup>

<sup>1</sup>Department of Biotechnology, Faculty of Converging Sciences and Technologies, Islamic Azad University, Science and Research Branch, Tehran, Iran.

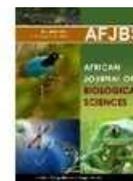
<sup>2</sup>Department of Medical Biotechnology, Faculty of Medical Sciences and Technologies, Islamic Azad University, Science and Research Branch, Tehran, Iran.

#### ABSTRACT

*The aging population presents a significant challenge in modern society, with an increase in age-related diseases due to a longer life expectancy not matched by a similar extension in healthy lifespan. This situation demands focused medical research and healthcare advancements in treating aging-associated conditions. An integrated approach is recommended, encompassing lifestyle changes, diet, and mental and emotional health, to mitigate aging and its related diseases. In skin health, innovative nanoparticle-based formulations are being explored to enhance the anti-aging properties of active ingredients. Skin aging is influenced by intrinsic factors like metabolic slowdown, disease, mitochondrial DNA damage, hormonal changes, and extrinsic factors such as UV radiation, smoking, pollutants, and lifestyle choices. These factors lead to skin issues like dryness, uneven texture, and visible pores. UVB radiation and high blood sugar levels accelerate aging by increasing oxidative stress and collagen damage. Antioxidants are crucial in defending against reactive oxygen species (ROS). Nanoparticles, with sizes under 100 nm, include various types like carbon-based, inorganic, organic, and composite nanomaterials. They are used in skincare due to their enhanced skin penetration properties. These nanoparticles, both organic and inorganic, show promise as anti-aging agents, working at different stages of the skin aging process. Understanding the delivery mechanisms of anti-aging agents through the skin is key to creating effective anti-aging products. Nanotechnology in cosmeceuticals integrates biologically active ingredients with therapeutic benefits into cosmetics. This technology addresses the limitations of traditional products by reducing particle size and improving ingredient efficacy. Nanocosmeceuticals are being developed for anti-aging, sun protection, skin lightening, and hair growth.*

*Overall, the article highlights the potential of gold nanotechnology in developing effective and safe anti-aging strategies. Further research is warranted to explore the long-term safety and efficacy of nanoparticle-based formulations for skin rejuvenation and to optimize their delivery for enhanced therapeutic outcomes.*

**Keywords:** Gold Nanoparticles, Anti-Aging, Skin Health, Cosmetic



## Application of silver nanoparticles in wound treatment

Aida Alamdar ,<sup>1</sup> Amina Javid <sup>1\*</sup>

<sup>1</sup>Department of Biology, Faculty of Engineering and Science, Yazd University of Science and Art, Yazd, Iran

Aida Alamdar ,[aidaalmdr@yahoo.com](mailto:aidaalmdr@yahoo.com)

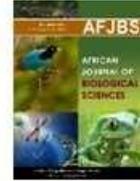
Amina Javid ,[javid@sau.ac.ir](mailto:javid@sau.ac.ir)

Corresponding author: Email :[javid@sau.ac.ir](mailto:javid@sau.ac.ir)

### Abstract

Wounds are always one of the problems that humans are dealing with. The wound healing process includes 4 stages of homeostasis, inflammation, proliferation and transformation or maturation. A wide variety of substances are being used in the treatment and healing of wounds. Nanotechnology, as a science that has many applications in various fields today, enters this field as well. Silver nanoparticles are one of the products of this science, which have shown antimicrobial effects against a wide range of microorganisms, including gram-negative and gram-positive bacteria, as well as inhibition of biofilm formation. These nanoparticles are synthesized by various methods, including chemical, mechanical and green, which is superior to other methods due to the unique characteristics of green synthesis. Although the accumulation of silver metal in the body causes toxicity, its accumulation is reduced in the nanoscale and does not harm the body. Dressings that contain silver nanoparticles, or plates and nanocomposites that are produced from combinations of different materials with these nanoparticles, have had notable and significant effects in wound treatment. It is expected that silver nanoparticles will be suitable substitutes for antibiotics. Also, the evidence shows that in the future, there is a possibility of treating wounds caused by diabetes with these nanoparticles.

**key words :** Nanoparticles, silver nanoparticles ,nano dressing, nanofiber, wound covering, wound treatment



## Forecast And Check Features Aerodynamic a projectile rotating by using dynamic fluids Computational

Mojtaba Ishrati<sup>\*</sup>,<sup>1</sup>Abbasali Ebrahimi Nia,<sup>2</sup> Yunus Poladrang.<sup>3</sup>

- 1m.eshrati2015@sharif.edu

-2abbasali.ebrahiminia@gmail.com

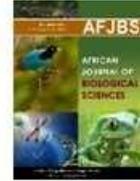
-3poladrang@gmail.com

### Summary

In this study simulation Numerical a projectile rotating With Diameter 30 Mm To Forecast Coefficients Aerodynamic do became And Results CFD With Method flight test Comparison became . eight Coefficient Or Derivatives sustainability Contains Coefficient axial force, drag coefficient, The derivative of the vertical force coefficient in relation to the angle of attack, the derivative of the lift force coefficient in relation to the angle of attack, the derivative of the damping torque coefficient, The derivative of the screw torque coefficient with respect to the angle of attack, the derivative of the Magnes torque coefficient, the derivative Coefficient the force Magnus That From Parameters Important To solve Equations Move projectile At now Rotation are, item Check appointment took number Mach At Opinion taken done From 0.6 until the 2/57 variable Is. The initial speed of the projectile and the initial rotation speed are 875 m/s and 7153 radians/s, respectively. Is considered . To Computing Aerodynamic coefficients, all Simulations Respective At angle Attack 2 Degree do became coefficients Aerodynamic Predicted According to Results simulation CFD With matrix Coefficients At Equations Move Match Data will be And precision Direction Predicted projectile rotating particle for direct object Increase Gives . The two stability derivatives of the Magnesian torque coefficient and the Magnesian force coefficient both have a minimum value at Mach number 1.2.

**Keywords** :projectile, aerodynamic coefficients, stability derivatives, computational fluid dynamics.

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## Cardiac complications following refeeding in patients with long-term food restriction: a review

Raha Tabah Far 1, Hakime Eskandari Sabzi 2, Mehsa Tafzali 3, Mena Ebrahimzadeh 4

1- Department of Community Health Nursing, Faculty of Nursing, Abadan University of Medical Sciences, Abadan, Iran rahatabahfar@yahoo.com

2- Department of Pediatric Nursing, Faculty of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran hakimeheskandari1994@yahoo.com

3- Department of Pediatric Nursing, Faculty of Nursing, Abadan University of Medical Sciences, Abadan, Iran mahsa.tafazoli@gmail.

4- Department of Psychiatric Nursing, Faculty of Nursing, Abadan University of Medical Sciences, Abadan, Iran monaebrahimzadeh21@gmail.com

### Summary

Topic: Cardiac complications following refeeding in patients with long-term food restriction: a review

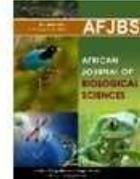
Objectives: Re-feeding syndrome is one of the disorders that occurs after re-feeding in patients who have had food restrictions for a long time, and then the patient has disorders such as metabolic, cardiopulmonary, blood, water balance and Electrolyte and brain and nerves, each of which may be life-threatening. In this study, we decided to review the articles that have investigated cardiac complications in refeeding syndrome.

Research method: in this review study using the keywords Electrocardiogram; Cardiac Heart Failure; Refeeding; Refeeding syndrome; And their Farsi equivalents were searched in the Google Scholar, Elsevier, ProQuest, Scopus, PubMed, SID databases, and finally 10 articles were selected and included in the study and analyzed using the content analysis method.

Findings: Re-feeding in patients who were at risk caused changes in their ECG so that the QT interval in the ECG increased and then Torsant de Point arrhythmia occurred, which is a dangerous arrhythmia. Also, it has been reported in cases of pulseless ventricular tachycardia, ventricular fibrillation and broken heart syndrome (Takotsubo cardiomyopathy) that in all these cases therapeutic support including cardiopulmonary resuscitation and correction of electrolyte disorders have been carried out and the patients have recovered from the heart point of view. Re-feeding returned. Although in one case, the treatment measures were not effective and the person suffered a cardiac arrest and died.

Discussion and conclusion: refeeding syndrome is a complication that can be dangerous and life-threatening. The high knowledge and awareness of doctors, nurses and nutritionists and the proper cooperation of these groups in the matter of patient care, early diagnosis of patients at risk, compliance with the refeeding protocol, careful monitoring and evaluation of the patient during refeeding are the most important measures. which can be effective in preventing this complication.

**Keywords:** Electrocardiogram; Heart Failure; Cardiac; Refeeding; Refeeding syndrome



## Age of the universe, calculation and verification of cosmic data

**Ghazal Attari**

- 10th grade student of Farzangan High School

### Summary

Astronomy is one of the few sciences that any non-specialist can contribute to its progress. By spectrometry of 12 sample galaxies using the VIREO virtual observatory, we first calculate their speed away from us, then by measuring the distance of these galaxies using the spectroscopic parallax method, we calculate the Hubble constant. The age obtained from our calculations for the universe is 13.08 billion years, and the age that the Hubble Space Telescope has calculated for the universe so far is about 13.8 billion years. Considering that the Hubble space telescope is much more powerful than terrestrial telescopes, this error is acceptable.

**Keywords:** Hubble's law, VIREO virtual observatory, spectrum, galaxy, age of the universe, Hubble's constant



**Examining the application of elements of nature in the poems of Salman Savoji ,  
Manouchehri Damghani and Molana**

**Bitā Solati Morada Ali**

Ph.D. student of Persian language and literature, majoring in lyrical literature, Faculty of Literature and Humanities, Urmia University

**Solati8998@gmail.com**

**Summary**

In the history of Persian literature, poets have created new and original scenes by using the elements of nature in their works, including Rumi, Manouchehri Damghani and Salman Savji. All three poets were naturalists and in this article we have tried to review some of them.

**Keywords:** nature , poems , Manochehri , Molana , Salman Savji



## Review of several methods based on wavelet transform for data steganography

Sattar Maidan -Narjes Al - Sadat Sadrzadeh Rohol Alam

Professor of Islamic Azad University of Kohbanan, computer and computer department - master expert of Bahman University of Kerman

Email: [sattar.meydani@gmail.com](mailto:sattar.meydani@gmail.com)

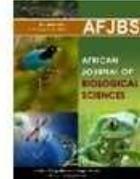
2- Coach of the technical and professional organization of the country - senior expert of Bahmanyar University of Kerman

Email: [amini472325@gmail.com](mailto:amini472325@gmail.com)

### Summary

To control and secure the transmission of information on the Internet , from steganography Data encryption is used to ensure the security of the encrypted message . Data classification can be used in the area of transformation and communication Jadshad's secrets . Wavelet conversion methods that are in the field of conversion . Or the frequency in this are presented in the article , they are good against attacks and intruders , and they are difficult to be hacked by eavesdropping . Invisibility , security and strength are used .

**keywords:** Steganography, transform and spatial domain , wavelet transform, embedding capacity, imperceptibility



## Comparison of some Iterative Methods for Finding Simple Root of Nonlinear Equations

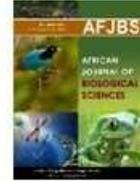
Davood Nezami Behrooz

1 Department of Mathematics, Tuyserkhan Branch, Islamic Azad University, Tuyserkhan, Iran

### ABSTRACT

We give a comparison of some iterative methods without memory for approximating a simple root of nonlinear equations presented in recent years. The efficacy of the present methods is tested on a number of numerical examples.

**Keywords:** Simple root, two-point iterative method, Kung and Traub conjecture, optimal order of convergence, computational efficacy.



## **Identifying financing challenges in the evolution of startup companies (case of study: oil, gas and energy field)**

Forough Kalvani

Master of Entrepreneurship, new business orientation, University of Tehran, Tehran, Iran.  
[foroughkalvani1350@gmail.com](mailto:foroughkalvani1350@gmail.com)

### Summary

Startups are very important for the growth and development of the country by playing a key role in the commercialization of new ideas resulting from university research and exploiting the knowledge spillover from the industry. But on the other hand, the difficulty and heavy costs of financing for startups is an important issue in relation to the economic progress of developing countries and the economic growth of regions. Because financing challenges in startups are one of the main factors of startups' failure, especially in the early stages of startups' life. Therefore, the present research was conducted with the aim of identifying the challenges faced by startups in their stages of evolution. First, by studying the background of the research, the conceptual framework of the research was presented. In this process, the tools of in-depth semi-structured interviews, document and text review were used. The examined samples of this mining case include scientific and practical experts in the field of entrepreneurship and startups in the field of oil, gas and energy. Evidence of saturation was evident from the tenth sample, but the interviews were continued up to 15 samples. Finally, by analyzing the theme, the concepts extracted from the narrations, categorized among them, categories, components and sub-components were identified. After going through various stages and aggregating the categories, components and sub-components in the research literature and the findings of the current research, 1 category, 2 components and 46 concepts were extracted for the research questions. Some of the extracted concepts are considered new concepts in this field, but most of the extracted concepts are confirmed by previous researches. The components of the research were divided into two components of internal financing challenges (challenges related to the internal conditions of the startup) and external (challenges related to outside the internal environment of the startup, including economic, legal conditions, etc.).

Keywords: entrepreneurial financing, startup, startup life cycle, energy.



## Comparison of self-esteem and irrational beliefs in women candidates and non-candidates for hair mesotherapy

Azam Bayani, 1, Masoud Pourhossein 2, Mohammad Bayani 3

1- Bachelor of Midwifery, Gonabad University of Medical Sciences, Iran.  
[m.bayani.1394@gmail.com](mailto:m.bayani.1394@gmail.com)

2- Bachelor of Nursing, Islamic Azad University, Firdous Branch, Iran.  
[Pourhoseinmasoud@gmail.com](mailto:Pourhoseinmasoud@gmail.com)

3- Masters in Clinical Psychology, Islamic Azad University, Torbetjam branch, Iran.  
[Bayanimh2@mums.ac.ir](mailto:Bayanimh2@mums.ac.ir)

### Summary

The aim of the research was to compare self-esteem and irrational beliefs in women candidates and non-candidates for hair mesotherapy, which was used after the event (causal-comparative) study method. The statistical population included women candidates and non-candidates for hair mesotherapy in spring In 1402, they visited Qazvin Skin and Hair Clinic. The sample consisted of 300 people who were selected through available sampling. To collect information, Rosenberg's self-esteem scale questionnaire and Jones-Ahvaz irrational beliefs test were used. The results showed that there is a statistically significant difference in the self-respect of women candidates and non-candidates for hair mesotherapy, and the level of self-respect in women candidates for hair mesotherapy is lower than that of women who are not candidates for hair mesotherapy, but the results show a significant difference in the irrational beliefs of candidate and non-candidate women. Doing hair mesotherapy did not show. ( $P>0.05$ ).

Keywords: self respect, irrational beliefs, hair mesotherapy.