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### 1ST INTERNATIONAL CONFERENCE ON MANUFACTURING, MATERIAL SCIENCE AND ENGINEERING (ICMMSE-2019)

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Conference date: 16-17 August 2019

Location: Telangana, India

ISBN: 978-0-7354-1951-3

Editors: B. Sridhar Babu, Kaushik Kumar, T. Vishnu Vardhan and S. Sathees Kumar

Volume number: 2200

Published: Dec 20, 2019

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## PRELIMINARY

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# Influence of slat and flaps arrangement on the performance of modified Darrieus wind turbine

AIP Conference Proceedings 2200, 020012 (2019); <https://doi.org/10.1063/1.5141182>

P. S. V. V. Srihari<sup>1,a)</sup>, P. S. V. V. S. Narayana<sup>2</sup>, K. Lakshman Rao<sup>3</sup>, J. Durga Venkatesh<sup>4</sup>, and P. Rajesh<sup>5</sup>

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TOPICS

## ABSTRACT



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## Experimental study on vortex intensification of gravitational water vortex turbine with novel conical basin

AIP Conference Proceedings 2200, 020082 (2019); <https://doi.org/10.1063/1.5141252>

P. S. V. V. Srihari<sup>1,a)</sup>, P. S. V. V. S. Narayana<sup>2,b)</sup>, K. V. V. S. Sanath Kumar<sup>3</sup>, G. Jaya Raju<sup>4</sup>, K. Naveen<sup>5</sup>, and P. Anand<sup>6</sup>

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Home > AIP Conference Proceedings > Volume 2200, Issue 1 > 10.1063/1.5141194

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# Thermal performance investigation of MMC heat sinks for low CTE electronic components cooling

AIP Conference Proceedings 2200, 020024 (2019); <https://doi.org/10.1063/1.5141194>

P. S. V. V. Srihari<sup>1,a)</sup>, P. S. V. V. S. Narayana<sup>2,b)</sup>, G. V. Prasada Rao<sup>3</sup>, M. Rambabu<sup>4</sup>, and V. S. Surya Prakash<sup>5</sup>

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Conference date: 18-22 December 2018

Location: Hisar, Haryana, India

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## Influence of valence state of vanadium ions on structural and spectroscopic features of multi-component $\text{PbO-Al}_2\text{O}_3\text{-TeO}_2\text{-GeO}_2\text{-SiO}_2$ glass ceramics

AIP Conference Proceedings 2115, 030231 (2019); <https://doi.org/10.1063/1.5113070>

Ch. Tirupataiah<sup>1,2</sup>, M. V. Sambasiva Rao<sup>3</sup>, A. Suneel Kumar<sup>1</sup>, S. Suresh<sup>4</sup>, T. Narendrudu<sup>5</sup>, G. Chinna Ram<sup>5</sup>, and D. Krishna Rao<sup>1,a)</sup>

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## Structural and spectroscopic investigations of multi-component $P_2O_5-PbO-Ga_2O_3-Dy_2O_3-Bi_2O_3$ glass system: An insight to the energy transfer between $Bi^{3+}$ and $Dy^{3+}$ ions

AIP Conference Proceedings 2115, 030229 (2019); <https://doi.org/10.1063/1.5113068>

G. Chinna Ram<sup>1,2,a)</sup>, T. Narendrudu<sup>2</sup>, S. Suresh<sup>3</sup>, A. Suneel Kumar<sup>1</sup>, M. V. Sambasiva Rao<sup>4</sup>, Ch. Tirupataiah<sup>1,5</sup>, and D. Krishna Rao<sup>1</sup>

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ICMPC-2019

## Biofilm Resistant Surfaces and Coatings on Implants: A Review

P S V V S Narayana<sup>a\*</sup>, P S V V Srihari<sup>b</sup>

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### Abstract

The study of microbes in and around us that have a drastic affect on human health plays a vital role in medicine. Bacterial infections kill millions of people in the world. The structured formation of bacterial communities, known as biofilms, is the major cause of bacterial infections. Nosocomial infections are caused by biofilms due to their pathogenic nature. Biofilms contribute about 80% and 65% to chronic and microbial infections respectively. The adhesion of bacteria to implant surface is the source of biofilm formation. Therefore, the surface characteristics of the implant material dictate the host cells association and response. Biofilms are resistant to antibiotics, disinfectants, and the human immune system. Implants surface modifications play a vital role in improving their biocompatibility and anti-infection properties. Providing antibacterial and adhesion resistant surface coating acts as a novel approach to combat biofilms. This review presents the process of biofilm formation on different implants and the next generation of surface modification techniques to enhance biocompatibility and antimicrobial functionality using surface engineering and nanobiotechnology.

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**Keywords:** Biofilm; implants; surface modification; antibacterial coatings; antibacterial surfaces

### 1. Introduction

The replacement, or enhancement, and support of a body structure is done by use of an implant. Orthopedics, cardiovascular surgery, urology, dental, neurosurgery, plastic and reconstructive surgery all utilize implants to some extent. The reasons for their use are varied such as to replace worn, damaged or diseased part of the anatomy; to

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# Proceedings of International Conference on Computational Intelligence and Data Engineering

Proceedings of **ICCID** 2018

**Editors:** [Nabendu Chaki](#), [Nagaraju Devarakonda](#),  
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**Proceedings of International Conference on Computational Intelligence and Data Engineering** pp 197–206

## Image Enhancement Based on Fractional Calculus and Genetic Algorithm

G. Sridevi  & S. Srinivas Kumar

Conference paper | First Online: 17 April 2019

243 Accesses | 4 Citations

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### Abstract

Image enhancement is an interesting topic in the image processing area. In this work, image enhancement with fractional-order derivative and genetic algorithm is proposed. Fractional-order derivative possesses a non-local property, which is helpful to find the fine edges of the image. In this paper, firstly, fractional-order partial differences are computed in forward  $x$ -direction, backward  $x$ -direction, forward  $y$ -direction, and backward  $y$ -direction. These differences are represented based on discrete Fourier transform (DFT). Finally, genetic algorithm (GA) is applied for the fractional-order

  
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17. <http://sipi.usc.edu/database>

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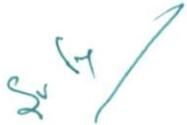
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