



Dr. Debabrata Barik

Associate Professor,
Department of Mechanical Engineering,
Karpagam Academy of Higher Education
Verified email at nitrrkl.ac.in

Area of Interest:

[Fuels and Combustion](#), [Carbon Capture Fuel Cell](#), [Dual Fuel Combustion](#), [Bio-gas](#), [Bio-hydrogenTEG](#)

[Investigation on fluid flow heat transfer and frictional properties of Al₂O₃ nanofluids used in shell and tube heat exchanger](#)

D Barik, ARAJ TG, ROY Reby

[Investigation and separation of waste solar panels](#)

P Jayapradha, D Barik, A Jeeyadeen, PNM Sanjoop, M Prahaladha
Materials Today: Proceedings

[Experimental investigation of Lawsonia inermis L. biofuel as fuel in a diesel engine](#)

S Aravind, D Barik, P Ragupathi, G Vignesh
Materials Today: Proceedings

[Production methods of aluminium foam: A brief review](#)

R Karuppasamy, D Barik
Materials Today: Proceedings

[Production of open-Cell Metallic Foam Made of Lm6 Aluminum Alloy through Sand Casting](#)

R Karuppasamy, D Barik, MS Dennison

[Electricity Generation from Exhaust Waste Heat of Internal Combustion Engine Using Al₂O₃ Thermoelectric Generators](#)

P Ragupathi, D Barik, G Vignesh, S Aravind
Journal of Applied Science and Engineering 23 (1), 55-60

[Experimental analysis on turning of AISI 4340 steel using non-textured, dimple textured and MoS₂ coated dimple textured carbide cutting inserts at the rack surface](#)

G Vignesh, D Barik, P Ragupathi, S Aravind
Materials Today: Proceedings

[Combined adjustment of injection timing and compression ratio for an agricultural diesel engine fuelled with Nahar methyl ester](#)

SK Dash, P Lingfa, D Barik

International Journal of Ambient Energy, 1-13

Effects of waste chicken fat derived biodiesel on the performance and emission characteristics of a compression ignition engine

D Barik, R Vijayaraghavan

International Journal of Ambient Energy 41 (1), 88-97

Investigation on the effect of aluminium foam made of A413 aluminium alloy through stir casting and infiltration techniques

R Karuppasamy, D Barik, NM Sivaram, MS Dennison

International Journal of Materials Engineering Innovation 11 (1), 34-50

Turning operation of AISI 4340 steel in flooded, near-dry and dry conditions: a comparative study on tool-work interface temperature

MS Dennison, NM Sivaram, D Barik, S Ponnusamy

Mechanics and Mechanical Engineering 23 (1), 172-182

Energy from Toxic Organic Waste for Heat and Power Generation

D Barik

Woodhead Publishing

Toxic Waste From Biodiesel Production Industries and Its Utilization

G Vignesh, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 69-82

Energy extraction from toxic waste originating from food processing industries

D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 17-42

Paper Industry Wastes and Energy Generation From Wastes

PM Gopal, NM Sivaram, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 83-97

Toxic waste from textile industries

NM Sivaram, PM Gopal, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 43-54

Economic Factors for Toxic Waste Management

D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 195-203

Toxic waste from leather industries

NM Sivaram, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 55-67

Toxic Waste From Municipality

A Sam, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 7-16

Health hazards of medical waste and its disposal

KK Padmanabhan, D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 99-118

Introduction to energy from toxic organic waste for heat and power generation

D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 1

Comprehensive Remark on Waste to Energy and Waste Disposal Problems

D Barik

Energy from Toxic Organic Waste for Heat and Power Generation, 205

Effective Utilization of Job Shop Scheduling in Auto Industries with the aid of Social Spider Optimization

KB Gavali, AK Bewoor, D Barik

Journal of Green Engineering 8 (4), 475-496

Effect of compression ratio on combustion performance and emission characteristic of a direct injection diesel engine fueled with upgraded biogas–Karanja methyl ester–diethyl ...

D Barik, A Kumar, S Murugan

Energy & Fuels 32 (4), 5081-5089

Combined effect of compression ratio and diethyl ether (DEE) port injection on performance and emission characteristics of a DI diesel engine fueled with upgraded biogas (UBG ...

D Barik, S Murugan, S Samal, NM Sivaram

Fuel 209, 339-349

Combustion analysis of the diesel–biogas dual fuel direct injection diesel engine–the gas diesel engine

D Barik, AK Satapathy, S Murugan

International Journal of Ambient Energy 38 (3), 259-266

Performance Enhancement in Job Shop Scheduling with the Aid of Hybrid Social Spider Optimization and Gray Wolf Optimization

PS Gavali KB, Bewoor A, Barik D

International Journal of Applied Engineering Research 12 (21), 10530-10540

Job shop scheduling with the aid of hybrid social spider optimization and gray wolf optimization with industrial scheduling case study

BD Gavali KB, Bewoor A

International Journal of Mechanical Engineering and Technology (IJMET) 8 (10 ...

Experimental investigation on the behavior of a direct injection diesel engine fueled with Karanja methyl ester-biogas dual fuel at different injection timings

D Barik, S Murugan, NM Sivaram, E Baburaj, PS Sundaram

Energy 118, 127-138

Experimental investigation on the behavior of a DI diesel engine fueled with raw biogas–diesel dual fuel at different injection timing

D Barik, S Murugan

Journal of the Energy Institute 89 (3), 373-388

Effects of diethyl ether (DEE) injection on combustion performance and emission characteristics of Karanja methyl ester (KME)–biogas fueled dual fuel diesel engine

D Barik, S Murugan

Fuel 164, 286-296

Effects of pilot fuel injection timing on the performance and emission characteristics of a diesel engine fuelled with biogas

D Barik, S Murugan

International Journal of Oil, Gas and Coal Technology 13 (4), 407-427

An artificial neural network and genetic algorithm optimized model for biogas production from co-digestion of seed cake of karanja and cattle dung

D Barik, S Murugan

Waste and biomass valorization 6 (6), 1015-1027

Assessment of sustainable biogas production from de-oiled seed cake of karanja-an organic industrial waste from biodiesel industries