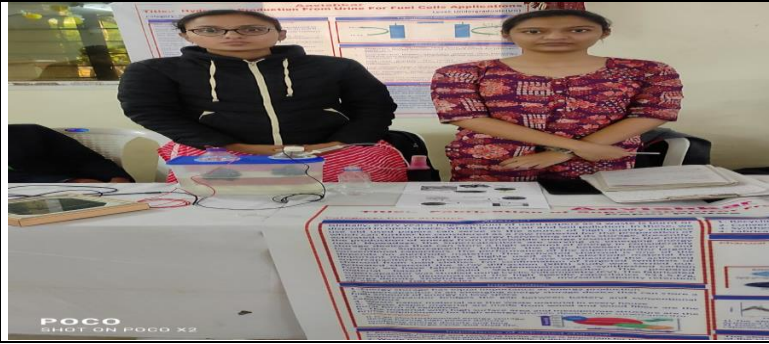


**Shri Shivaji Education Society Amravati's**  
**J. D. Patil Sangludkar Mahavidyalaya,**  
**Daryapur**  
**Department of Physics**  
**Extension Activity (Year 2023-2024)**  
**Details of Avishkar Project**

<b>Project Name- Generation of Hydrogen from urine waste</b>	
Name of Students under this project:	<ol style="list-style-type: none"> <li>1. <b>Ku. Guri Deshmukh</b></li> <li>2. <b>Ku. Pratiksah A. Darmale</b></li> </ol>
Class:	<b>B.Sc.-III PCM Group</b>
Aim and Objectives of Project:	<p><b>Objective:</b></p> <p>The primary objective of this project is to develop a sustainable and efficient method for generating hydrogen gas from urine waste. By leveraging the chemical reactions within urine, the project aims to:</p> <ol style="list-style-type: none"> <li>1. <b>Explore the Feasibility:</b> Investigate the feasibility of using urine as a feedstock for hydrogen production.</li> <li>2. <b>Optimize the Process:</b> Develop and optimize a process to maximize hydrogen yield and minimize costs.</li> <li>3. <b>Assess Environmental Impact:</b> Evaluate the environmental and economic impacts of the hydrogen generation process.</li> <li>4. <b>Promote Sustainability:</b> Contribute to sustainable energy solutions by utilizing waste materials to produce clean energy.</li> </ol>
Outcome of this Project:	<p><b>Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. <b>Hydrogen Production Efficiency:</b> Demonstrate the ability to produce hydrogen gas from urine with a specified efficiency (e.g., grams of hydrogen per liter of urine).</li> <li>2. <b>Process Optimization:</b> Identify and optimize key parameters (such as pH, temperature, and catalysts) that affect hydrogen yield. Develop a scalable process for hydrogen production.</li> <li>3. <b>Environmental and Economic Analysis:</b> Provide a comprehensive analysis of the environmental impact, including potential reductions in waste and emissions. Assess the cost-effectiveness of the hydrogen production process compared to other methods.</li> <li>4. <b>Prototype Development:</b> Design and develop a prototype system for hydrogen generation from urine that can be tested and evaluated.</li> <li>5. <b>Scientific and Technical Documentation:</b> Produce detailed scientific reports and technical documentation outlining the methods, results, and implications of the research.</li> <li>6. <b>Public Awareness and Education:</b> Raise awareness about the potential of waste-to-energy technologies through presentations, publications, or community outreach.</li> </ol>

Photograph



  
Head  
Department of Physics  
J.D. Patil Sangliudkar Mahavidyalaya,  
Daryapur

