

Non-degradability of plastics is a global concern. This research involves degradation of HDPE and LDPE plastics by pyrolysis and fractional distillation of the by-product vapours. The process involves fabrication of the furnace/reaction chamber, oil extraction, oil testing (octane number, cetane number, flash point, fire point and viscosity analysis) and real time engine testing. The methodology adopted is efficient and socially relevant and the fuel obtained is the key solution for the rising energy demand of the country and the fast depleting non-renewable resources.



# 34 PROJECT

## PLASTIC WASTE TO ENERGY – AN INNOVATIVE TECHNOLOGY

**N N Nikhil**  
ME

**Chris Stephen**  
ME

**Vivian Marion George**  
ME

**Arsh Ahmed Parvez**  
ME