

(54) Title of the invention : Yield enhancement through synergism by ultrasonication assistance in the transesterification of fig seed oil using fig leaves catalyst

(51) International classification :A61K 089200, C11B 010400, C12N 158200, G11C 071200, H01L 216600
 (86) International Application No :PCT//
 Filing Date :01/01/1900
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

(71)Name of Applicant :**1)Sivakumar Krishnamoorthy**

Address of Applicant :Plot No. 26, Ma. Po. C. Street, Anna Nagar Extension, Vaiyavur Road. Big Kanchipuram. -----

2)Arumugam S**3)Dr S Baskar**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :**1)Sivakumar Krishnamoorthy**

Address of Applicant :Plot No. 26, Ma. Po. C. Street, Anna Nagar Extension, Vaiyavur Road. Big Kanchipuram. -----

2)Arumugam S

Address of Applicant :Dr. S. Arumugam : Department of Mechanical Engineering, Faculty of Engineering and Technology, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (Deemed to be University) [SCSVMV], Kanchipuram, Tamilnadu, India. Kanchipuram -----

3)Dr S Baskar

Address of Applicant :Centre for Excellence in Energy and Nano Technology, Department of Mechanical Engineering, S. A. Engineering College, Chennai – 77, Tamilnadu, India. Chennai ---

(57) Abstract :

The titled invention Yield enhancement through synergism by ultrasonication assistance in the transesterification of fig seed oil using fig leaves catalyst discloses the transesterification of fig-seed oil (fso) using a fig-leaf-biocatalyst (flbc) through a synergistic optimised conventional and ultrasonication parameters. The synergism of optimal conventional and ultrasonication transesterification parameters suggests that the proposed reaction condition would help to reduce the production cost in terms of energy requirements i.e., power consumption of 133.2 Wh is sufficient to yield 91.7% of fig seed oil biodiesel using flbc instead of 1270 Wh for an 84.2% yield through KOH catalyzed-conventional transesterification process.

No. of Pages : 21 No. of Claims : 5