

## CSIR Technology Awards 2009

Instituted in 1990 'CSIR Technology Awards' seek to foster and encourage multi-disciplinary in-house team efforts and external interaction for technology development, transfer and commercialization. These awards include one each for: (i) Life Sciences; (ii) Physical Sciences including Engineering; (iii) Innovation; (iv) Business Development and Technology Marketing; and (v) Most Significant CSIR Technology of the Five Year Plan Period (awarded once in five years coinciding with the plan period, to such technology which has proven in the market place, atleast for 5 years).

Each Technology Award comprises of a cash prize of Rs. 2 lakh except the award for the "Most Significant CSIR Technology of the Five Year Plan Period" which has a cash prize of Rs. 5 lakh. Besides, a plaque and a citation is also given to the awardees.

For the year 2009, two awards out of the available five are being given, following a very stringent criterion so as to maintain high standard set for the awards. They are in the category of 'Physical Sciences including Engineering' and 'Innovation'.

The Technology Award for Physical Sciences including Engineering goes to IIP, Dehradun, for developing Innovative technology for upgrading fuel oil components into premium refinery products.

Developed process technology is based on an innovative concept of combining two distinct and unrelated disciplines i.e. 'solvent extraction' and 'catalytic cracking'. The process provides improved quality de-aromatized feed (raffinate) for secondary conversion unit i.e. Fluid Catalytic Cracking (FCC). Developed technology helps in reducing catalyst consumption, load on FCC catalyst regenerator and CO<sub>2</sub> emissions and will also help in meeting future carbon emission legislations of the refinery. The process is easily adoptable by a refinery which has conventional lube refining facility and does not require major additional investment for setting up of any new units.

The technology is licensed to M/s. Hindustan Petroleum Corporation Limited (HPCL), Mumbai. Commercial operations have increased annual profit of the refinery to the tune of Rs. 87.6 crore.

The Technology Award for Innovation goes to CDRI, Lucknow, for development of synthetic endoperoxide anti-malarials as substitute to artemisinin derivatives.

The innovation involves development of an easily accessible, low cost synthetic and safe endoperoxides compounds as substitute for currently available semi-synthetic artemisinin derivatives such as artemether, arteether and artesunic acid. Extensive biological evaluations have led to identification of two most promising molecules.

Pre-clinical development of these potential anti-malarial compounds has been completed in collaboration with IPCA Laboratories, Mumbai. One compound is currently under Phase I clinical trials at PGIMER, Chandigarh. International patents have also been obtained for the innovation.