

Highlights of Annual Report 2017-18





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- i. DSIR is the nodal department for granting recognition to In-house Research and Development centres of industry. During this period 163 R&D units were granted fresh recognition and 537 R&D units were granted renewal of recognition.
- ii. DSIR has given recognition to 1997 In-house R&D centres, of these 121 companies incurred an annual expenditure of over Rs. 50 crores each, 489 companies incurred an annual expenditure in the range of Rs. 5 crore to Rs. 50 crores and 420 industries incurred an annual expenditure in the range of Rs. 2 crore to Rs. 5 crores.
- iii. Public funded research institutions (PFRI), Universities, IITs, IISc and NITs registered under PFRI program of DSIR can avail custom duty exemption, vide Notification No. 43/2017-Customs dt. 30.06.2017 and corrigendum dated 22.07.2017-Custom Notification no. 43/2017 dt 30.06.2017, an amendment to the main notification No. 51/96-Customs dt. 23.07.1996 and other amendment from time to time. During the period under report 22 such institutions were newly registered with DSIR and 112 institutions were granted renewal of registration.
- iv. During the period under report 33 new Scientific & Industrial Research Organisations (SIROs) were recognized by DSIR and 180 SIROs were granted renewal of recognition.
- v. Secretary DSIR, designated as the Prescribed Authority accorded fresh approvals to **106** companies under section 35(2AB) of Income-tax Act, 1961. The detailed R&D expenditure of the approved companies has been examined by DSIR and **614** reports valued at **Rs. 16015 crores** have been forwarded to Chief Commissioner Income Tax (Exemption) in Form 3CL, as required under the IT Act
- vi. Common Research & Technology Development Hubs (CRTDH) programme in its first phase had set up three hubs, two hubs in the sector of Affordable health at CSIR-IHBT, Palampur and CSIR-CCMB, Hyderabad and one hub in the sector of Environmental interventions at CSIR-NIIST, Thiruvanthapuram. During the period under report & in its second phase, Department has approved setting up four new hubs in the sector of low cost machining, Electronics / renewable energy, New materials, Chemical process.
- vii. Department under PRISM (Promoting Innovations in Individuals, Start-ups and MSME's) scheme has supported 21 new projects. Some of the initiated projects are - Artificial human-skin as an alternative to animal model; - Wave energy converter; - Green diesel production from waste cooking oil by green technology. This scheme has successfully completed a total of 15 projects supported during the period under report.
- viii. IT-eG division progressively implements e-Governance in the Department, which is in conformance to the National eGovernance Action Plan. This division has brought automation in DSIR operations by enterprise integration, program implementation and e-service delivery.





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- ix. Department under PACE (Patent Acquisition & Collaborative Research and technology Development) scheme provides catalytic support to industries & institutions for traversing their journey from proof of concept to pilot scale. During the period under report, seventh batch of advertisement inviting proposals from industries / institution for technology development & demonstration projects were called.
- x. In A2K+ (Access to Knowledge Development and Dissemination) scheme of DSIR, 03 studies were carried out under A2K+-Studies and 05 events were supported under A2K+-Events. Under Technology Development & Utilization Programme for Women (TDUPW), 08 projects were ongoing.
- xi. DSIR played an active role in APCTT's functioning, particularly relating to its programmes and policies. APCTT assisted member countries by strengthening their "National Innovation Systems" through innovation capacity, promoting technology transfer and deployment, enhancing competitiveness of enterprises and promoting new technologies and entrepreneurship.
- xii. The Right to Information Act 2005 has been implemented successfully in the department. The proactive disclosures are regularly updated and available on the DSIR Website. DSIR has received 177 applications during the period under report and all the applications were registered and disposed off on RTI Request & Appeal Management Information System.
- xiii. CSIR, an autonomous organization under DSIR, is the only Indian organization to found place among the top 100 global institutions. It is ranked 12th in the world among the Government institutions.
- xiv. CSIR-IITR has developed a device "Oneer" providing a novel solution for safe drinking water for domestic and community purpose.
- xv. CSIR-NCL has developed a simple & ecofriendly solution called "Jalabhishek" for immersion of Lord Ganesha idols made from plaster of paris.
- xvi. CSIR-IICT for the first time in country, using indigenous technology has developed a synthetic aviation lubricant using available renewable raw material to a major extent.
- xvii. CSIR-CBRI has signed an agreement with NTPC for utilization of flyash through geopolymer technology in the construction sector.
- xviii. CSIR-NBRI has developed "transgenic rice" that will reduce arsenic accumulation and contamination in rice grains.
- xix. CSIR-NPL has developed "Hydro-Electric Cell" that operates at room temperature and it is made from inexpensive precursors that are cheaper than fuel cells.
- xx. CSIR-CSIO has developed an advanced reading machine "Divya Nayan" for visually impaired.
- xxi. CSIR-CDRI reports the development of Vitamin B6 (VitB6) modified pH sensitive charge reversal nanoparticles for efficient intracellular delivery of Doxorubicin (DOX), a chemotherapy medication used to treat cancer.
- xxii. CSIR-CFTRI has developed a procedure for extraction of phycobiliproteins from macroalgae by using ultrasonication and other conventional methods.
- xxiii. CSIR-CSMCRI has developed a method for the preparation of efficient and stable anion exchange membranes (AEMs) by inter-polymerization of polyethylene and polystyrene-co-polydivinylbenzene for electro-dialytic applications.
- xxiv. CSIR-NCL has developed a tannin-formaldehyde (TFA) and tannin-aniline-formaldehyde (TAFA) resins for adsorptive removal of arsenite and arsenate metal ions from the contaminated water.



- xxv. CSIR-CRRI has conducted a detailed study on the possibility of utilizing the Municipal Solid Waste (MSW) as an embankment fill material.
- xxvi. CSIR-NISCAIR has developed three facilities for Geospatial, Biospatial and Environmental studies as part of the VACCIN project under Climate Change Informatics programme.
- xxvii. CSIR-4PI has developed a scenario-based approach to seismic hazard assessment, i.e. Neo-Deterministic Seismic Hazard Assessment (NDSHA).
- xxviii. CSIR-CEERI has designed and developed ion controller based Fluid-FET concept for micro reactor, an unique passive particle separator-cum-counter chip for WBC, RBC & plasma from blood; micro-viscometer based on dielectric property of fluids.
- xxix. Consultancy Development Centre (CDC), an autonomous institution of DSIR set up for promotion, development and strengthening of consultancy skills and capabilities in the country including enhancement of export of consultancy and professional services. CDC has undertaken 06 projects and generated total revenue of Rs. 319.48 lakhs.
- xxx. The National Research Development Corporation (NRDC), a Public Sector Enterprise under DSIR was assigned 108 new processes, signed 41 Memorandums of Understanding. Corporation had a gross income of Rs. 2627.62 lakhs during financial year 2016-17.
- xxxi. Central Electronics Limited (CEL) is a Public Sector Enterprise under DSIR, has been the pioneer in the country for manufacturing of the many strategic electronic components. Company has recorded production of Rs. 302.59 Crore and an annual sales of Rs. 291.97 Crore in FY 2016-17.



