

## **About Anna University**

Anna University was established in 1978 as a unitary type of University. It offers higher education in Engineering, Technology and Allied Sciences relevant to the current and projected needs of the society. Besides promoting research and disseminating Knowledge gained therefrom, it fosters cooperation between the academic and industrial communities. Recently, Anna University has been accredited by NAAC with 'A' Grade.

## **About Centre for Intellectual Property Rights (CIPR)**

The CIPR, Anna University was established in the year 2005 to create awareness and offer assistance to Academicians, Researchers, Entrepreneurs and Innovators to identify, protect and manage Intellectual Property Rights (IPR) effectively. The CIPR involved jointly with Tamil Nadu Technology Development and Promotion Centre (TNTDPC) of Confederation of Indian Industries (CII) in conducting many certificates courses on Intellectual Property Rights (IPR).

## **Objectives of CIPR**

- To promote awareness on IPR among students, research scholars, research & development establishments, faculties of educational institutions, SMEs, large enterprises, etc.
- To organize short-term courses, seminars, workshops and conferences on IPR and related activities.
- To protect Intellectual creations of students, research scholars, faculties, scientists, entrepreneurs, industries and others through a streamlined procedure to register their patents, trademark, copyrights and others IPR in an effective manner.

## **Services of CIPR**

### **➤ Patents**

CIPR carries out extensive Patent Search using free and paid database. We have expertise and experienced professionals to do patent searches, patent specification drafting, patent claims drafting, patent filings and other related works.

### **➤ Design Patents**

CIPR carries out search and filing services of design patents for shape, configuration, pattern, composition of lines, colours, etc. applied to any product(s).

### **➤ Trademarks**

CIPR carries out trademark search and trademark application filing for logo, symbol, design, image, sound, colour, slogan, smell, word, phrase or combination of these elements.

### **➤ Copyrights**

CIPR assists in copyrights filing related to the original work of literary (like poems, books, etc), artistic (like painting, sculptures, photographs, etc), dramatic, musical work, cinematographic films, sound recording, software programme, etc.

### **➤ Conduct of IPR Awareness Programme**

The CIPR regularly conducts several awareness programs to educate the importance of IPRs to students, research scholars, faculties and scientists of R&D institution, Universities, SMEs and large establishments.

**Details of patents as on 31<sup>st</sup> December 2015**  
**(Department/Centre wise)**



## (1) Aerospace Engineering

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. K.M.Parammasivam, G. Sivaraj, S. Senthil Kumar, (3777/CHE/ 2010)	Aerodynamic drag reduction of a hatch back car using base bleed	-	Yes	-	-
2	Dr. K.M.Parammasivam, G. Sivaraj, S. Senthil Kumar, (3778/CHE/ 2010)	Timization of vortex generator for "sedan" car model for reduction of aerodynamic drag	-	Yes	-	-
3	Dr.K. Senthil kumar, A.Mohamed Rasheed, (5535/CHE/ 2012)	Rotary wing unmanned aircraft system, guidance and control method thereof	-	Yes	-	-
4	Dr.S. Thanigaarasu, (3765/CHE/2012)	Method and device for controlling SONIC under expanded jets	-	Yes	-	-

## (2) Biotechnology

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr.K. Sankaran, Mr.A.Alagumaruthana yagam A. R. Pavankumar, (239/CHE/ 2009)	A method to detect the microbial resistance using fluorescence	-	-	Yes	-
2	Dr.P. Gautam, C. Subbalakshmi Latha, (375/CHE/ 2009)	A method for microbial production of extracellular lipase using vegetable oil substrates	-	-	Yes	-
3	Dr.P. Gautam, B.S.Lakshmi, V. Sujatha, K.S. Vinod Kumar (832/CHE/ 2009)	A method for producing metal oxide nano-particles using tamarind seed polysaccharide	-	Yes	-	-

4	Dr. UshaAntony, R. Padmavthi, M. Gopilka Pandey, N. Ramasubramanian, (890/CHE/ 2010)	Process and method of vegetable preserves in the form of conserves slices and conserve with vegetable pieces	-	-	Yes	-
5	Dr. UshaAntony, E. Bhuvaneswari, S. Revathi, N. Ramasubramanian (892/CHE/ 2010)	Sugar-free sweets process and method thereof	-	-	Yes	-
6	Dr. K.Sankaran, T. Elavaransan, Alagmaruthanayagam, (1891/CHE/ 2010)	A method to detect bacterial growth & antibacterial resistance based on fluorescence quenching	-	-	Yes	-
7	Dr. K. Sankaran, Shruthi Hamsanathan (2569/CHE/ 2010)	A Process to enhance sensitivity of human interferon gama detection in ELISA using bacterial lipid modification	-	-	Yes	-
8	Dr. P. Kaliraj, J. Madhumathi, Prince R. Prabhu, (1366/CHE/ 2011)	Dominant T-epitope of filarial transglutaminase and chimeric peptide vaccines for lymphatic filariasis	-	-	Yes	-
9	Dr. P. Kaliraj J. Madhumathi G. Anugraha, R. Prabhu (1367/CHE/2011)	Peptide immunogens of lymphatic filarial ALT-2 and lymphatic filarial vaccine composition comprising the same	-	-	Yes	-
10	Dr. P. Kaliraj, K. Sankaran, Sharmila Sam, I. Christiana, (2035/CHE/ 2011)	A bacterial lipid modification of a filarial protein to enhance the immune-prophylactic efficacy in animal & humans	-	-	Yes	-
11	Dr. K. Sankaran, T. Elavarasan (1496/CHE/2015)	Simple of rapid method for estimation of milk protein	-	Yes	-	-

### (3) Chemistry

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. A. Pandurangan, (3150/CHE/2008)	Synthesis of GE nano wireencapsulated within MWCNT by CVD	Yes	-	-	-
2	Dr. A. Pandurangan, S. Chandrakishore, (5605/CHE/2014)	Novel catalyst-free self seeded method for the production of C-SI-GE and nanotubes by CVD	-	Yes	-	-
3	Dr. A. Pandurangan, (US20110111227A1)	Method for production of germanium nanowires encapsulated within multi-walled carbon nanotubes	-	Yes	-	-

### (4) Chemical Engineering

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. M. Alagar, S. Devaraju M. R. Vengatesan (3636/CHE/2014)	One Pot Synthesis of bismaleimide derivations.	-	Yes	-	-
2	Dr. M. Alagar, S. Devaraju, (3637/CHE/ 2014)	One Pot Synthesis of novel skeletal modified diamine used as a curative and impact modifier for epoxy resins.	-	Yes	-	-
3	Dr. K.V. Radha, P. Thyriyalakshmi (5144/CHE/ 2014)	Synthesis of FMPC and preparation of chitosan – FMPC particles.	-	Yes	-	-

## (5) Computer Technology

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. S. Thamarai Selvi, Dr. K. Senthil Kumar, G. Kannan, A. Mohamed Rasheed, (593/CHE/ 2007)	A system and a method to assess the trustworthiness of a resource provider	-	-	-	Yes
2	Dr. S. Thamarai Selvi, R. Kumar, P. Balakrishnan, K. Rajendar, G. Kannan, R. Rajiv, (3027/CHE/2010)	A system and a method thereof for scheduling and supporting virtual resource management in a grid network	-	Yes	-	-
3	Dr. S. Thamarai Selvi, K. Senthil Kumar, G. Kannan, A. Mohamed Rasheed, (5536/CHE/2012)	Cloud based control, guidance and management of unmanned aircraft systems	-	Yes	-	-
4	Dr. S. Thamarai Selvi Mohd Amril Nurman Mohd Sidek Mohammad- Fairus K. Rajendar (PCT/MY2012 /000152)	A method and system of extending computing grid resources	-	Yes	-	-

## (6) Computer Science and Engineering

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. R .Baskaran, S. Velmourougan, (2355/CHE/ 2010)	Secure software development model.	-	Yes	-	-
2	Dr. R. Baskaran, (3128/CHE/ 2010)	Evaluation metrics set for communication aspects of multi agent systems.	Yes	-	-	-
3	Dr. R. Baskaran, S. Velmourougan, (2320/CHE/ 2011)	Vedha baba software development mode.	-	Yes	-	-



## (7) Crystal Growth

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr .S. Narayana Kalkura, R. Vani Sarath, Chandra veerla, (1424/CHE/ 2010)	Medium for removal of fluoride from water	-	-	Yes	-
2	Dr. J. Kumar, Dr. K. Sankaran, M. Jaya Prakasan, T. Dhinesh Kumar, (3064/CHE/2010)	A process to characterize biochemical reactions using sensor instrumentation based on capacitance and conductance change	-	Yes	-	-
3	Dr. K. Baskar, (1460/CHE/ 2011)	Synthesis and characterization of nano-crystalline gallium nitride by nitridation of Ga-EDTA complex	-	-	Yes	-

## (8) Environmental Studies

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. N. Vasudevan, (1675/CHE/ 2006)	A process for the biological treatment of an industrial effluent	-	-	-	Yes
2	Dr. N. Vasudevan, (587/CHE/ 2009)	A process for the treatment of distillery waste water using aerobic sequencing batch reactor	-	-	Yes	-
3	Dr.N.Vasudevan R. Kanimozhi , (711/CHE/ 2009)	A biofilm support for the treatment of wastewater and process for preparing the same	-	-	Yes	-
4	Dr.N. Vasudevan Veenagayathri, (1164/CHE/ 2010)	A method for biodegradation of chlorophenols by a halotolerant bacterial consortium under saline conditions	-	-	Yes	-

5	Dr.N. Vasudevan V. R. Manoj, (1645/CHE/ 2010)	A method for the treatment and recirculation of aquaculture wastewater	-	-	Yes	-
6	Dr. S. Kanmani, (870/CHE/ 2015)	Gasphase recovery of H2 from H2S using photocatalysis	-	Yes	-	-

### (9) Electronics & Communication Engineering

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. K. Malathi, M.Gulam Nabi Alsath, A. K. shrivastav, (1374/CHE/ 2012)	Dual band notched dielectric resonator reflect array for c/r band	-	Yes	-	-
2	Dr. K. Malathi, Aswathy K Sarma, A. Henridass, C. Raviteja, (2660/CHE/ 2014)	Mutual Coupling Reduction in MIMO antenna with serpentine Type structure resonator	-	Yes	-	-
3	Dr. K. Malathi, M. Gulam Nabi Alsath, (6413/CHE/ 2014)	Shared aperture multi-service design for automotive communication	-	Yes	-	-
4	Dr. K. Malathi, K .P. Jayaram, M. Gulam Nabi Alsath, (5336/CHE/ 2015)	A UHF RFID antenna integrated with near field and far field operations	-	Yes	-	-
5	Dr. K. Malathi, M. Gulam Nabi Alsath, Livya Lawrance, (5337/CHE/ 2015)	A device and method for fabrication of ultra-wide band micro strip grid array antenna	-	Yes	-	-
6	Dr. K. Malathi, R. Vimal Samsingh, S. Esther Florence, (5338/CHE/ 2015)	Method and apparatus for non-destructive testing of composites using planar sensor	-	Yes	-	-
7	Dr. K. Malathi, S. Esther Florence, R. Vimal Samsingh, (5620/CHE/ 2015)	A method to fully integrate multi-layer woven electro-textile patch antenna	Yes	-	-	-
8	Dr. K. Malathi, S. Ramparabhu, M. Balaji, (5621/CHE/ 2015)	A method and device for a passive reconfigurable frequency selective surface	Yes	-	-	-

9	Dr.Mala John (CN 102346855B & US9082042B2)	System and method for classification of moving object during video surveillance	-	-	-	Yes
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#### (10) Electrical & Electronics Engineering

Sl. No	Name of the Inventor(s) Department, (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. B. Umamaheswari, J. Kavitha, (5589/CHE/2013)	Homopolar axial flux hub stepper motor	-	Yes	-	-

#### (11) Information Science and Technology

Sl. No	Name of the Inventor(s) Department, (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. V. Rhymend Uthariaraj P. Shunmuga Perumal , V. R .Elgin Christo, (1430/CHE/ 2012)	Gravitational potential energy propelled novel power generator	-	Yes	-	-
2	Mr. R. Muthuraj, (1733/CHE/ 2013)	Crime evidence provider cum help seeker	-	Yes	-	-

#### (12) Mechanical Engineering

Sl. No	Name of the Inventor(s), (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. N. V. Mahalakshmi, R. Karthikeyan, (1951/CHE/ 2005)	Turpentine blend composition with diesel oil	-	-	-	Yes
2	Dr. N. V.Mahalakshmi, (3376/DEL/ 2005)	Flow straightener-throttle for fan testing RIG	-	-	-	Yes
3	Dr. D. Mohan Lal, (941/CHE/ 2005)	A mixture of refrigerants	-	-	-	Yes
4	Dr. N.V. Mahalakshmi, Dr.P.K. Devan, (2279/CHE/ 2007)	New poon oil composition-diesel blend as alternative fuel for diesel engine	-	-	-	Yes

5	Dr. N. V. Mahalakshmi, R. Karthikeyan (794/CHE/ 2007)	Eucalyptus oil blend composition with diesel oil	-	-	Yes	-
6	Dr. D. Sangeetha, Swaminathan Elemathi, (2734/CHE/ 2008)	A process for preparation of Sulphonated polymer membrane	-	-	-	Yes
7	Dr. D.Sangeetha, S. Senthil-Kumar, Srinivansan Guhan, Lakshmanan Babu, (1544/CHE/ 2010)	Design and development of a proton exchange membrane fuel cell stack	-	Yes	-	-
8	Dr.D.Sangeetha, R. Muruganathan, K. Aravind Bhat, S. Shanmuga sunder, (4101/CHE/ 2011)	Triboelectricity generation device	-	Yes	-	-
9	Dr.D.Sangeetha Rethinasabapathy Muruganantham Perumal Bhavani (3958/CHE/ 2011)	Proton exchange membrane fuel cell stack working under high pure oxygen compressed air and self breath cathode	-	Yes	-	-
10	Dr. D. Sangeetha, A. Siva sankaran (321/CHE/ 2011)	A method of performance of a cation exchange membrane in a microbial fuel cell to generate electricity	-	Yes	-	-
11	Dr. D. Sangeetha, R. Vinodh (580/CHE/ 2011)	A novel anion exchange membrane for fuel cell application	-	Yes	-	-
12	Dr.S.Bala Sivananda Prabu, K.A.Padmanabhan, (2503/CHE/ 2012)	A sintered in-situ Titanium diboride ceramic cutting tool and method of making the same	-	Yes	-	-
13	Dr.S.Bala Sivananda Prabu , Dr.K.A. Padmanabhan, S. Madhavan, (2506/CHE/ 2014)	Sintered in-situ Titanium carbide ceramic cutting tool and method of making the same	Yes	-	-	-
14	Dr.V.S.Senthil kumar C.Rathinasuriyan (3002/CHE/ 2014)	Submerged Friction Stir welding under nano-fluidic environment (Provisional filing)	Yes	-	-	-
15	Dr. D. Sangeetha, Ayyaru sivasankar, (3031/CHE/ 2014)	Sulphonated Polyether – Ether-Ketone/ Sulphonated TIO2	-	Yes	-	-

		composite as proton exchange membrane for microbial fuel cell				
16	Mr.P.Pathalamuthu, Dr. V. R. Giridev, A. Siddharthan, (5603/CHE/ 2014)	Spirograph based mechanical assembly for fabrication testing and measurement of product with near uniform characteristics	-	Yes	-	-
17	Dr.R.Saravanan, (1009/MAS/ 1998)	A bubble pumps absorption cooler	-	-	-	Yes
18	Dr.K.AnanthaPadmanabhan (US8888965B2 & EP2222887B1)	Non-stoichiometric titanium nitride films	-	-	-	Yes

### (13) Medical Electronics

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. G. Ravindran, Dr.S.Shenbaga devi, (60/MAS/ 2001)	Hystero electrical activating mapping	-	-	-	yes

### (14) Nano Science and Technology

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. T. Devasena, (1461/CHE/ 2011)	A process for green synthesis silver nanoparticle using fenugreek leaves for medical application	-	Yes	-	-
2	Dr. T. Devasena, F. Arul Prakesh (3237/CHE/ 2012)	Chitosan based nanocomplex for sustained drug delivery	-	Yes	-	-

**(15) Production Technology**

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr.T.S.Sampath Kumar, Dr.S.K. Seshadri, A. Siddharthan, (848/CHE/ 2006)	A composition containing nanophase calcium deficient hydroxyapatite with Mg, Sr and Si synthesized from egg shell by microwave processing	-	-	-	Yes

**(16) Textile Technology**

Sl. No	Name of the Inventor(s) (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. Peer Mohammed, Dr. S. Subramanian, T. Sureshram, (1231/CHE/ 2008)	Point fluted bottom rollers for roller drafting system of yarn spinning and preparatory machines	-	-	-	Yes

**(17) Rubber and Plastic Technology**

Sl. No	Name of the Inventor(s) Department, (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Mr. Aamir Hussain, K. V. Janardhan, (112/CHE/ 2013)	Mechanical device attached for improved dispersive quality in two-roll rubber mixing mill	-	Yes	-	-

**(18) Constituent Colleges**

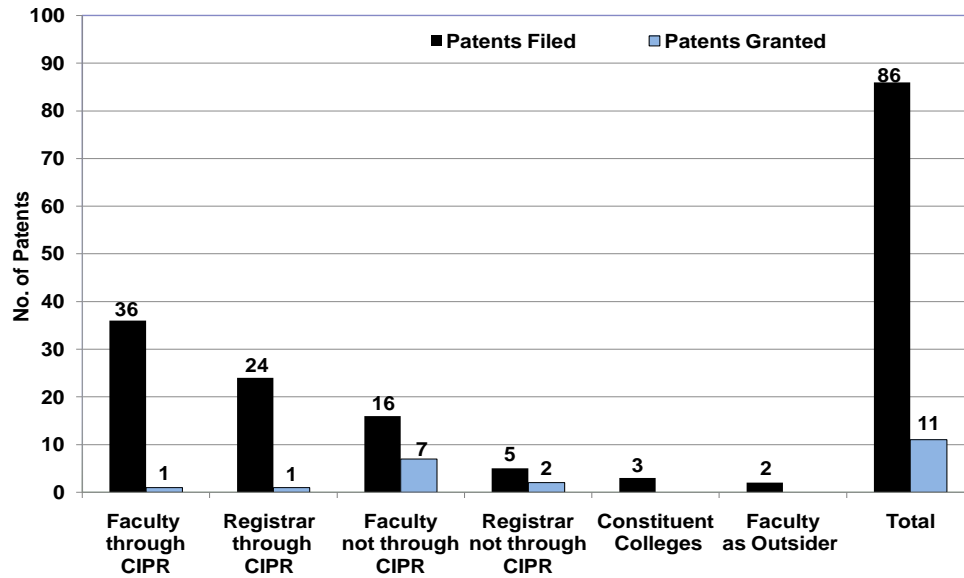
Sl. No	Name of the Inventor(s) Department, (Application No)	Title	Application Status			
			Not Published	Published Application	Application Under Examination	Granted Patent
1	Dr. R. Senthil, Mr. R. Silambarasan,  University College of Engineering, Villupuram (1892/CHE/ 2015)	Nox reducing additive composition for annona biodiesel	-	Yes	-	-
2	Dr. R. Senthil, Mr. R. Silambarasan,  University College of Engineering, Villupuram (1893/CHE/ 2015)	Jamun methyl ester new alternative fuel for diesel engine	-	Yes	-	-
3	Dr. R. Senthil, Mr. G. Mohan,  University College of Engineering, Villupuram (1869/CHE/ 2015)	Additive composition for biodiesel to reduce emission in diesel engine	-	Yes	-	-



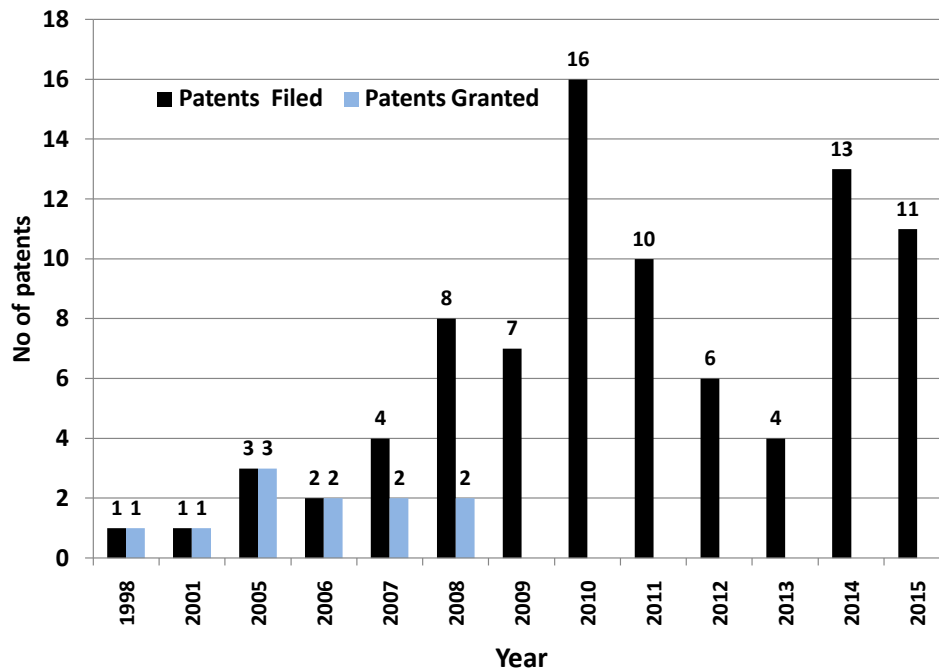


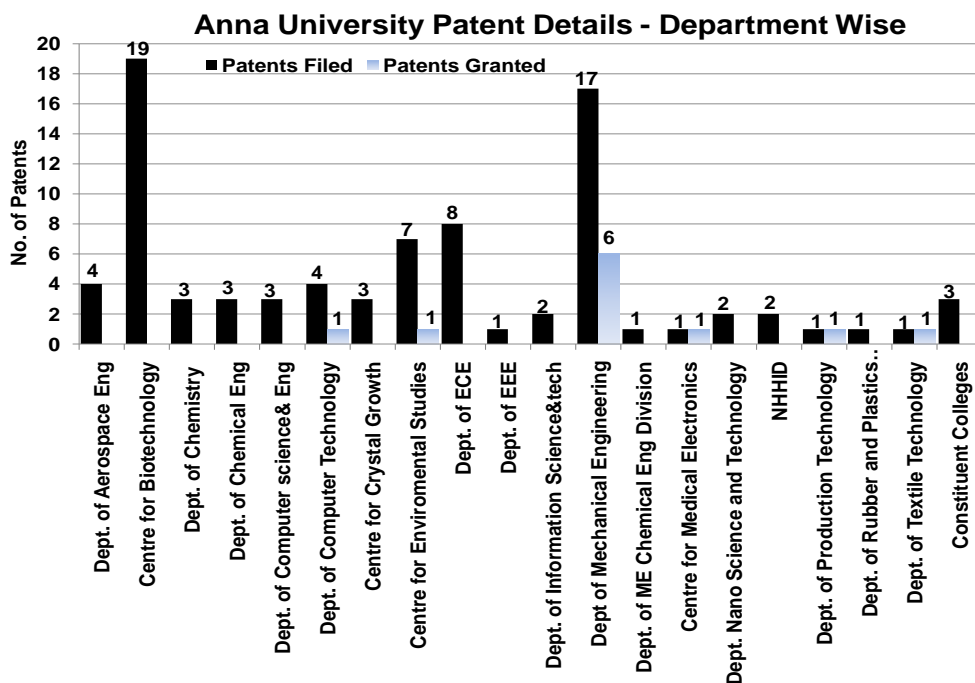
## **Graphical Representation of IPR report**

**Total No of Patents Filed by Anna University**

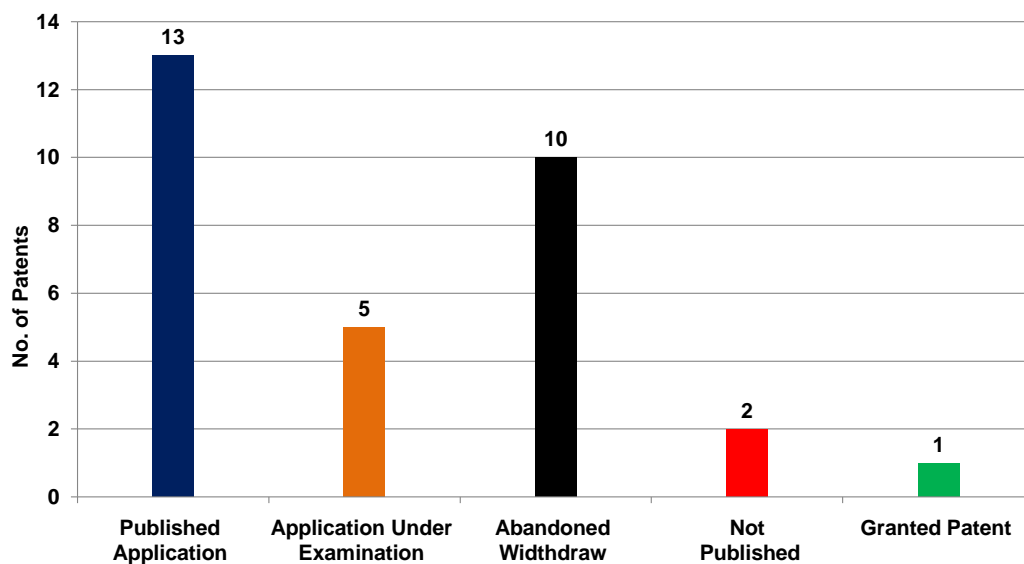


**Anna University Patent Details - Year Wise**

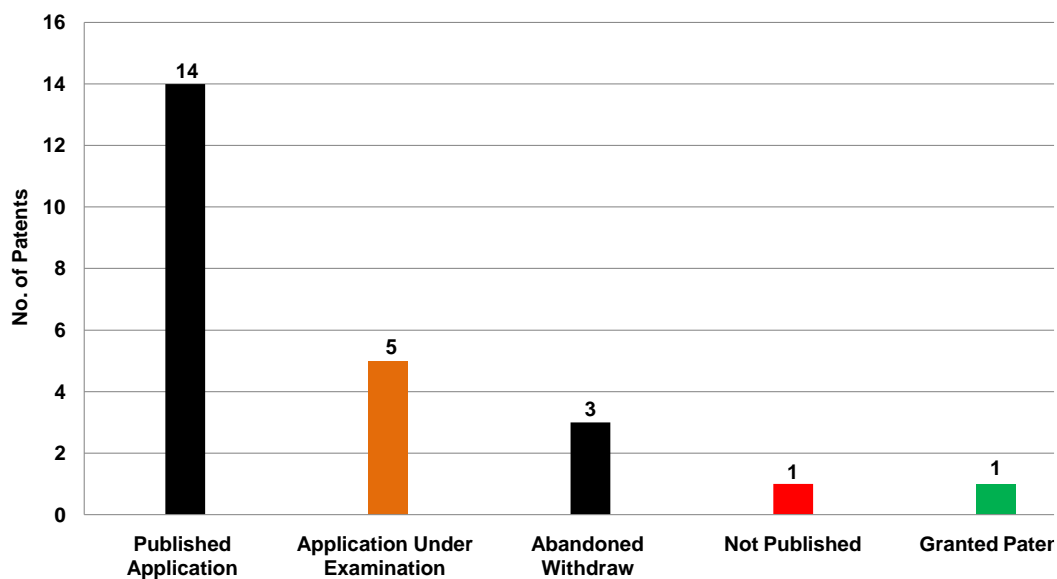




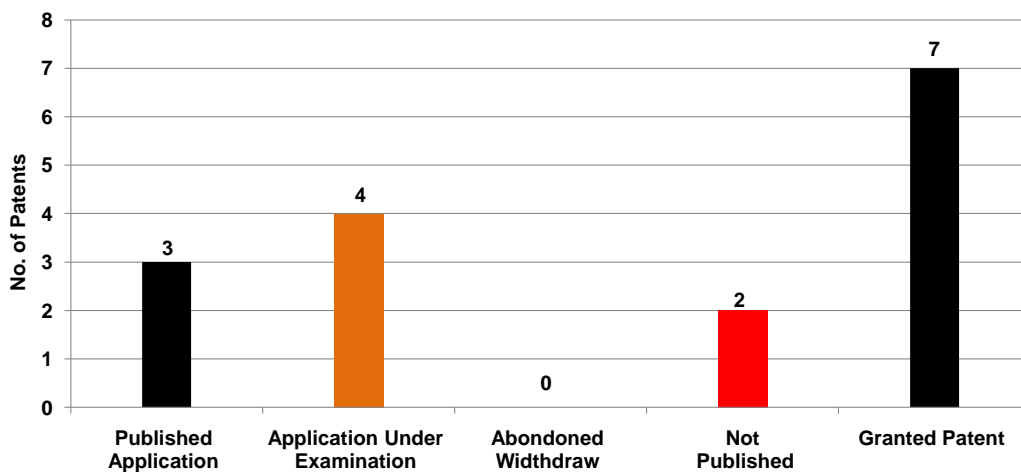
**Status of the Patents filed in the name of Faculty through CIPR**  
(Number of applications filed: 31)



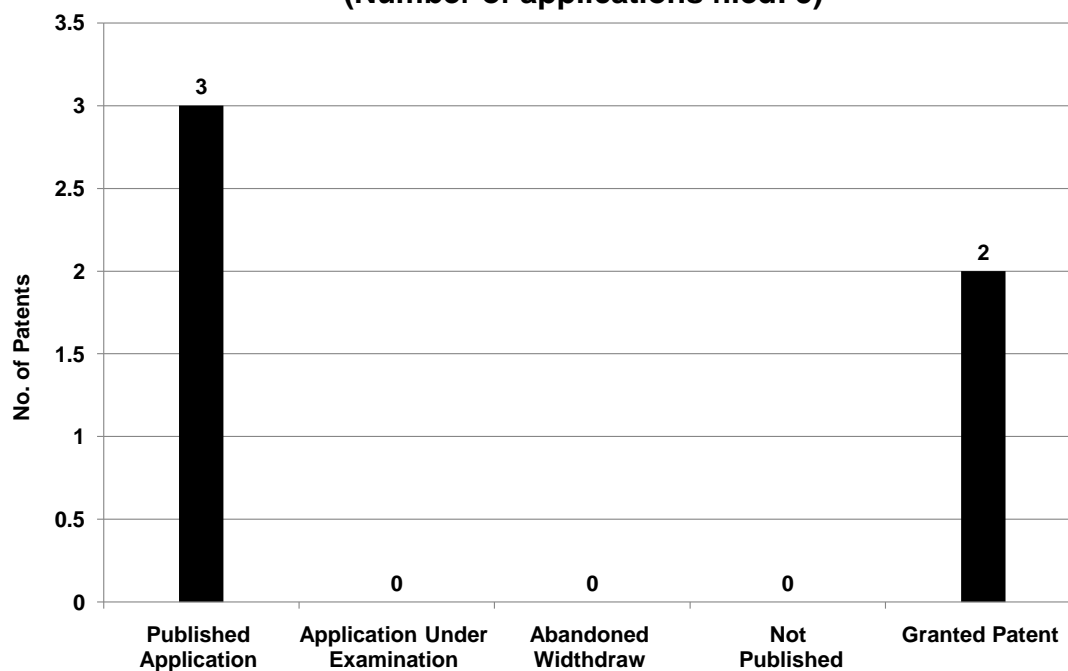
**Status of the Patents filed in the name of Registrar,  
Anna University through CIPR  
(Number of applications filed: 24)**



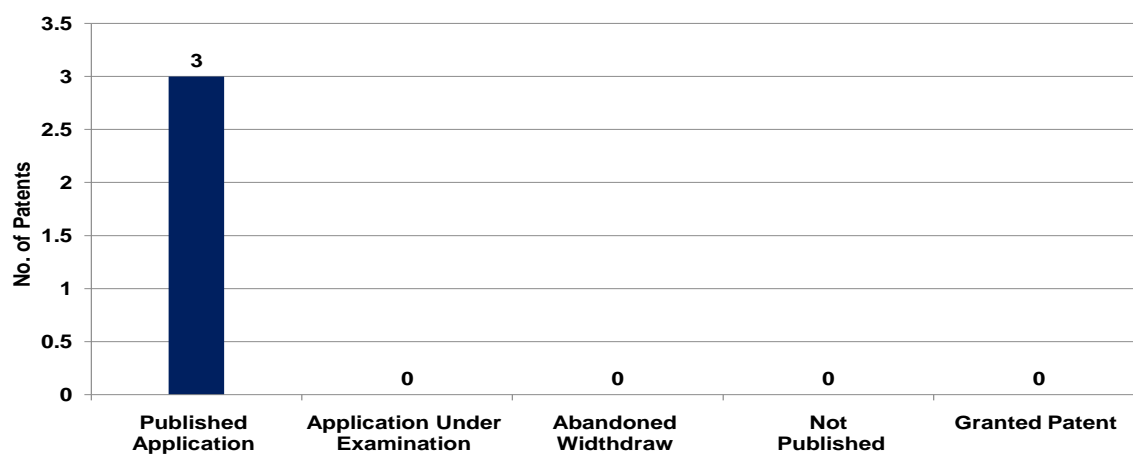
**Status of the Patents filed in the name of Faculty, Anna University  
not through CIPR  
(Number of applications filed: 16)**

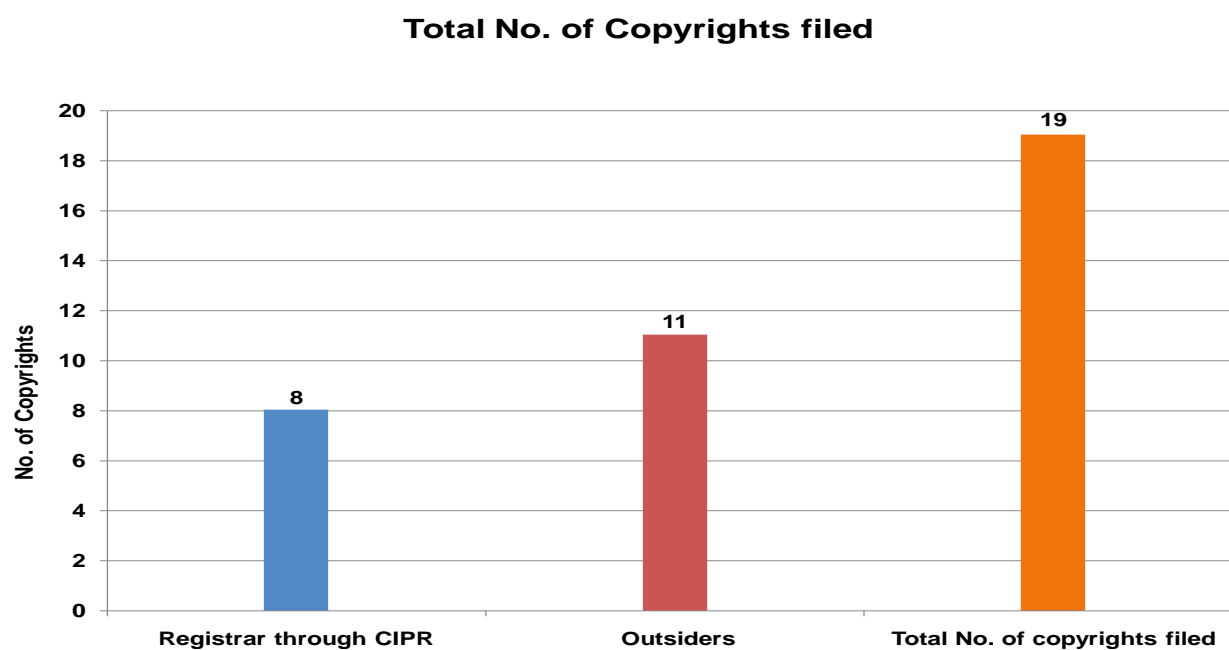
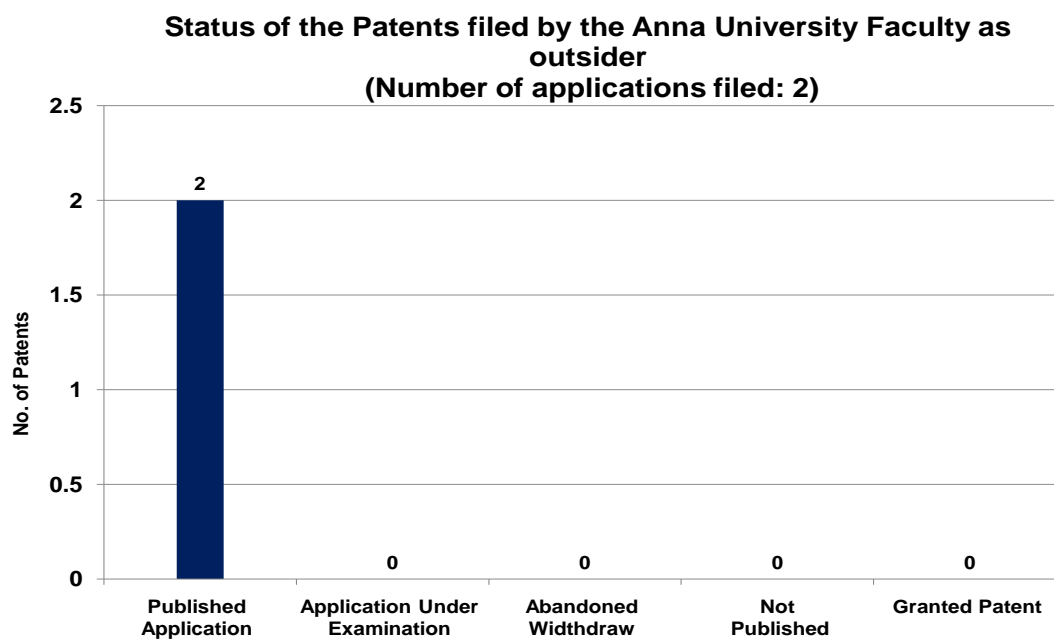


**Status of the Patents filed in the name of Registrar, Anna University,  
not through CIPR  
(Number of applications filed: 5)**



**Status of the Patents filed by the Constituent Colleges,  
Anna University  
(Number of applications filed: 3)**





### Status of the Trademarks filed through CIPR

