Patent applications filed by CLRI since 2000

Sl	Title	Inventor(s)
	2000-01	
1	An improved process for the preparation of a tanning agent	P Thanikaivelan, JR Rao, M Kanthimathi, BU Nair,T Ramasami
2	A process for the preparation of reconstituted collagen substratum	J Venugopal,V Arumugam,M Ramakrishnan,V Jayaraman,Mary Babu
3	An improved process for the preparation of a novel graft copolymer having molecular weight upto 300 000.	C Rose, N Samivelu,U Venkateswaralu,R Ramesh, RRajini,TP Sastry
4	An improved device for electron paramagnetic resonance imaging	N Chandrakumar, Victor Babu, V Visalakshi
5	A device for electron paramagnetic resonance imaging	N Chandrakumar, Victor Babu, V Visalakshi
6	A process for the purification of inorganic nitrogen laden waste water and or water	G Sekaran,A Gnanamani,Mary Babu, T Ramasami
7	An improved tanning device	D Lakshmanan, MCK Dhanaselvan, S Krishnan,N Samivelu,PG Rao
8	A process for the preparation of a novel synthetic tanning agent	M Kanthimathi,P Thanikaivelan, KJ Sreeram, JR Rao, R Sundaram, BU Nair, T Ramasami
9	A process for the preparation of transparent soft collagen film.	P.K.Sehgal, Md. Rafiuddin Ahmed, R Jayakumar, R Sripriya
10	A novel process of aqueous finishing for waterproof leathers.	V.John Sundar, S.Ramalingam, C.Muralidharan, N.Samivelu
11	A process for the preparation of a novel proteinoid-acrylate composite having molecular weight in the range of 1500020000 KD.	J.Kanagaraj, MD. Rafiuddin Ahmed, R. Jayakumar, N Samivelu, B. Ramanaiah
12	A process for the preparation of polyacrylate dispersion having free monomer content less than 0.1% *v/v*.	KSV.Srinivasan, S.Sudhakar, T.Padmavathy.
13	A process for the preparation of a Parchment like material.	C.Rose, MD.Ranganayaki, S.Ramakrishnan, S.Sudhalakshmi, TP.Sastry.
14	A novel process for preparation of dyed leather in more than one tone	T.Rangasamy, V John Sundar, R. Jagadeswaran, C.Muralidharan

	2001-02	
15	A process for the preparation of novel polysulfide copolymers	S.Sundarrajan, KSV.Srinivasan
16	A process for the purification of *Escherichia coli* contaminated water for reusable option.	G.Sekaran A.Gnanamani, KA Shanmugasundaram, Mary Babu, T Ramasami
17	A process for the preparation of plant based acrylate composite	J.Kanagaraj, KC Velappan, K.Venkataboopathy, PT.Perumal
18	An improved device for Leather processing	D Lakshmanan, B Thangaraj, N Samivelu, PG Rao,T Ramasami
19	A process for the preparation of a novel proteinoid for industrial applications	J.Kanagaraj, Rafiuddin Ahmed, V John Sundar, R Jayakumar
20	An improved process for making chrome tanned Leathers	V.John Sundar, C.Muralidharan
21	A process for the preparation of a novel synthetic Aluminium tanning agent	M Kanthimathi,P Thanikaivelan, JR Rao, BU Nair, T Ramasami
22	A process for the preparation of plant based reconstituted collagen substratum	T Ravikumar,N Shanmugasundaram, Mary Babu
23	A Formulation for the preparation of material for making impression of an object	G Saraswathy, TP Sastry, Gautham Gopalakrishnan,BN Das
24	A process for the preparation of a novel chemically modified fibrin-fibrillar-protein (FFP) composite sheet	SE Noorjahan,MD Ranganayaki,Ganga Radhakrishnan,BN Das,U Venkateswaralu, C Rose,TP Sastry
25	A process for the preparation of alkaline protease and its application in the pretanning process of leather manufacture	R.Seetha Laxman (NCL), S.Vijaymore (NCL), M.Vilas Rele (NCL), B.Seetha Rama Rao (NCL), V.Venkat Rao (NCL), Jogdand M.Balachandra Rao (NCL), V.Vishnu Desh Pande (NCL), R Boopathy Naidu (CLRI), P Manikandan (CLRI), D Ashok Kumar (CLRI), J Kanagaraj (CLRI), S Ramalingam (CLRI), N Samivelu (CLRI), R Puvanakrishnan (CLRI).

	2002-03	
26	A process for the preparation of poly(acyl sulfide) for industrial applications.	S.Sundarrajan, KSV.Srinivasan
27	A process for the preparation of leather like sheet and the sheet prepared thereby	N Vedaraman, T Rangasamy, C Muralidharan, PG Rao
28	A process for simultaneous recovery of chromium and iron from chromite ore processing residue	KJ Sreeram, T Ramasami
29	A surface applicator for flexible substrates	D Lakshmanan, PA Balakrishnan,P Pushpanathan,BV Ramabrahmam,N Samivelu, PG Rao
30	A novel three step bio process in leather processing	P Thanikaivelan, JR Rao, BU Nair, T Ramasami
31	A novel process for total lime sulfide free unhairing in skins/hides using enzymes	C Rose,L Suguna,R Rajini,N Samivelu,V Rathinasamy,S Ramalingam, K Iyappan,TP Sastry, T Ramasami
32	An improved process for the preparation of collagen sponge	PK Sehgal,R Sripriya
33	An improved process for making crust leather for transfer coat finishing	Sanjeev Gupta, B Ramanaiah, S. Ramalingam, P Muthulingam, N Samivelu, T Ramasami

2003-04

34	A process for the preparation of a synthetic tanning agent	M. Kanthimathi,P Thanikaivelan, JR Rao, BU Nair, T Ramasami
35	A process for leather making using saline water	N Vedaraman, K Iyappan, B V Ramabrahmam, C Muralidharan
36	A process for the preparation of a biopolymer scaffold for medical applications	D Vijaya Ramesh, Praveen Kumar Sehgal
37	An improved process for the preparation of bio-diesel	KC Velappan, S Sarvanan, N Vedaraman, P G Rao
38	A novel dehairing and fibre opening process for complete elimination of lime and sodium sulphide	S Saravanabhavan, P Thanikaivelan, J Raghava Rao, B Unni Nair, T Ramasami
39	An improved process for the preparation of wax emulsion for industrial applications	V Haribabu, P Suril, U Senthilkumar, V John Sundar, T Rangasamy, C Muralidharan, BSR Reddy, S Sadulla
40	A novel transposed process for making leather	S Saravanabhavan, P Thanikaivelan, J Raghava Rao, B Unni Nair, T Ramasami
41	A process for the preparation of collagen-chitosan bilayer material	A Rajaram, Rama Rajaram
42	A process for the preparation of a tanning cum dyeing agent	W Madhulatha, NK Chandrababu, G Jothi, D Muralidharan, VS Sundar Rao
43	A novel oxidative process for the unhairing of hides/skins	V John Sundar, N Vedaraman, Subhendu Chakrabarti, P A Balakrishnan, C Muralidharan
44	A process foe the preparation of cereals incorporated feed composite from animal fleshings	P Saravanan, R Yasmin Begum, M C K Dhanaselvan, G Rajeswari
45	A process for the preparation of viscoelastic, bio-erodible ophthalmic shield	PK Sehgal, J Hadassah
46	An improved oxidative process for making chamois leather	V John Sundar, T Rangasamy, N Vedaraman, Subhendu Chakrabarti, P A Balakrishnan, C Muralidharan
47	A process for the preparation of metal impregnated activated carbon polymer composite for industrial applications	G Sekaran, L J Kennedy, A Gnanamani, J Judith Vijaya
48	An improved process for the preparation of carbon nanotube for industrial applications	G Sekaran, L J Kennedy, J Judith Vijaya, S Rajamani
49	An improved process for the preparation of a tanning agent	J Kanagaraj, V John Sundar, C Muralidharan, S Sadulla
50	A novel process for the preparation of aldehyde from a proteinous source for industrial applications	J Kanagraj, G Suseela Rajakumar S Sadulla
51	A process for recovery of salt from salt laden water containing dissolved organics for reusable option	G Sekaran, A Gnanamani, B Prasad Rao, A Ganesh Kumar, S Rajamani
52	A process for the preparation of a novel collagen scaffold useful for wound dressing	N Shanmugasundaram, D Selvaraj, K Mathangi Ramakrishnan, V Jayaraman, Mary Babu
53	A process for the separation of chromium from chrome tanned collagen material	R Suthantharajan, K Chitra, E Ravindranath, B Umamaheswari, S Rajamani

	2004-05	
54	An improved process for the recovery of common salt from salt cured raw hides/skins for reduction of total dissolved solids in the effluents	PK Sehgal, V. Preethi, NK Chandra Babu, R Ramesh
55	A novel apparatus for scum removal for industrial applications	RA Ramanujam, K Thirumaran, R Arumugam
56	A process for making wet- pink leather	M. Chandrabose, N Nishad Fathima, KJ Sreeram, J. Raghava Rao, B. Unni Nair, T. Ramasami
57	Bio-tanning process for leather making	S. Saravanabhavan, P Thanikaivelan, J. Raghava Rao, BC Unni Nair, T. Ramasami
58	Process for the preparation of inorganic colorants from mixed rare earth compounds	KJ Sreeram, BC Unni Nair, T. Ramasami
59	A process for the preparation of poly(urethane-acrylic)copolymer dispersion for industrial applications	S. Sundar, N Vijayalakshmi, Sanjeev Gupta, R Rajaraman, Ganga Radhakrishnan
60	A process for the preparation of bio-tanning agent	P Thanikaivelan, S. Saravanabhavan, J. Raghava Rao, B Chandrasekaran, BC Unni Nair, T. Ramasami

	2005-06	
61	A novel catalyst useful for the removal of pathogens from waste water.	G Sekaran, A Gnanamani, LJ Kennedy, A Ganesh Kumar
62	A novel microbial consortium and use thereof for liquefaction of solid organic matter.	R Suthantharajan, K Chitra, B Umamaheswari, E Ravindranath, S Rajamani
63	A process for extraction of atelopeptide collagen from a collagenous source by microbial treatment.	S Aishwarya, V Shashirekha, PK Sehgal
64	Nano sized sulfide compound of Cerium and a process for the preparation thereof.	KJ Sreeram(CLRI), HY Shrivastava (CLRI), BC Unni Nair (CLRI), T. Ramasami (CLRI), UV Varadaraju (IIT Madras)
65	A sustainable landfill.	S Rajamani, E Ravindranath, K Sri Bala Kameswari, K Thirumaran, SV Srinivasan, R Suthantharajan
66	A method for measuring gas permeability of any solid permeable material and a device therefor.	PK Sehgal , J Hadassah
67	A process for making iron tanned leather using natural polysaccharide	NK Chandra Babu, R Karthikeyan, R Ramesh, T Ramasami
68	An improved process for making iron tanned leather.	NK Chandra Babu, R Karthikeyan, R Ramesh, B Ramaniah, T Ramasami
69	A process for the preparation of acrylate -amino acid nanoparticle copolymer dispersion for industrial applications.	Geetha Baskar, LJ Milton Gaspar, J Kanagaraj, Sanjeev Gupta, BSR Reddy, AB Mandal, NK Chandra Babu
70	A novel third phase electrode for electrocatalytic treatment of waste water	G Sekaran, Kandasamy Ramani, A Ganesh Kumar, L John Kennedy, K.A. Shanmugasundaram, B Prasad Rao
71	An improved process for the preparation of jatropha oil--acrylic co-polymer for tanning applications	V Hari Babu, P Krishniah, C Muralidharan, BSR Reddy
72	A process for the preparation of dog chews.	C Rose, KA Sujatha, PK Sehgal, TP Sastry
73	A novel solid separator	D. Lakshmanan, G. Rajagopal, B.V.Ramabrahmam, S.Krishnan, N.K.Chandrababu

	2006-07	
74	An improved process for producing leathers in more than one tone.	P.A. Balakrishnan, V. John Sundar, T. Rangasamy, N. Vedaraman, C. Muralidharan
75	A novel bio-erodible insert for ophthalmic applications and a process for the preparation thereof.	J Hadassah, PK Sehgal
76	A novel scouring device for industrial applications	R A Ramanujam, K Thirumaran
77	A novel protease for industrial applications	S S Nilegaonkar (ARI), V P Zambare (ARI), P P Kanekar(ARI), P K Dhakephalkar(ARI), S S Sarnaik (ARI), N K Chandra Babu (CLRI), B Ramaniah (CLRI), Rama Rajaram (CLRI), T Ramasami (CLRI), Y K Saikumari (IISc), P Balaram (IISc).
78	An improved process for dehairing and fibre opening of hide/skin	P. Thanikaivelan, S. Saravanabhavan, J. Raghava Rao, B. Chandrasekaran, B.C. Unni Nair, T. Ramasami
79	A novel ketene oligomer from aliphatic non-polar amino acids and a process for the preparation thereof	G. Sekaran, S. Swarnalatha
80	A novel alkaline protease and a process for the production thereof	A Dayanandan, L Sounderraj, R Judith, G Suseela Rajakumar
81	A novel transportable device for lifting and flaying animals	D. Lakshmanan (CLRI), P.K. Umesha (SERC), P.K. Sehgal (CLRI), N. Lakhsmanan (SERC), T. Ramasami (CLRI)
82	A tanning composition and a process for the preparation thereof	R Natraj,S Saravanabhavan,R Aravindhan,KJ Sreeram,J Raghava Rao, BC Unni Nair, T Ramasami
83	Preventive footwear for people with risk of mild to moderate foot problems	Gautham Gopalakrishna,BN Das, Md. Sadiq, KV Satish (all from CLRI); Vijay Viswanathan, Diabetes Research Centre, Chennai

	2007-08	
84	A Two-dimensional shape deformation device	V Arumugam, MD Naresh, R Sanjeevi, D Lakshmanan
85	A process for the preparation of a mixture of carbonaceous products from proteinaceous materials	P Thanikaivelan, MA Thiruvilan, B Chandrasekaran, J Raghava Rao, BC Unni Nair
86	A novel alkaline protease and a process for the preparation thereof	S Sivasubramanian, R Boopathy Naidu, NR Kamini, MK Gowthaman, P Saravanan, S Ramalingam, R Ramesh, J Kanagaraj, NK Chandrababu, YK Saikumari, P Balaram, IISc, Bangalore, R Puvanakrishnan
87	An improved process for making chamois leather	S Harikrishnan, V John Sundar, V Haribabu, C. Muralidharan, S. Sadulla
88	A process for the preparation of functional aliphatic hydrocarbons from volatile liquid hydrocarbons for industrial applications	G Sekaran, L John Kennedy, J Judith Vijaya, B Ravindran, A Udaya
89	A novel insole sheet and a process for the preparation thereof	G Saraswathy, G. Gautham, BN Das, R Rajaraman, Y Lakshmi Narayana, SN Jaisankar, Ganga Radhakrishnan, A.B. Mandal

	2008-09	
90	A bioactive keratin-silica matrix and a process for the preparation thereof.	R Karthikeyan, S Balaji, PK Sehgal, R Ramesh,NK Chandra Babu
91	An improved eco-friendly process for curing of raw hides and skins	S Saravanabhavan, J Raghava Rao, BC Unni Nair
92	A novel composition for chrome tanning of hides/skins	V John Sundar, T Rangasamy, C. Muralidharan
93	A novel water soluble sulfonated melamine formaldehyde ionic condensate and a process for the preparation thereof	SN Jaisankar, T Sivagamasundari, J Kanagaraj, Sanjeev Gupta, RJ Ganesh Jeevan, Ganga Radhakrishnan
94	A novel viscoelastic polyurethane and a process for the preparation thereof	G Saraswathy, G. Gautham, BN Das, R Rajaraman, Y Lakshmi Narayana, SN Jaisankar, Ganga Radhakrishnan, A.B. Mandal