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**Science & Humanities (First Year Engineering) Department**  
**List of Patents (Utility/Design/Copyrights.)**

Sr No.	Details	Type (Utility/ Design/ Copyrights)	Status (Published/ Examination/ Applied)
	<b>A.Y. 2023-24</b>		
1.	<b>Abhijeet R. Kadam</b> , Milind Jog, M.Jayasimhadri, Sanjay J. Dhoble, A biomaterial for thermoluminescence high dose dosimetry and method of preparation thereof. P. No. 202021053088	Utility	Granted
	<b>A.Y. 2022-23</b>		
1.	Prashant N. Parale, <b>Abhijeet R. Kadam</b> , Kamlesh V. Dabre, Abhivilas S. Nakhate, Sanjay J. Dhoble, Synthesis Process of orange deep red emitting $\text{Sm}^{3+}$ , $\text{Eu}^{3+}$ , $\text{Pr}^{3+}$ triple activated $\text{KBa}_2(\text{PO}_3)_5$ phosphite glass for WLEDs, P. No. 2022/12119	Utility	Granted
	<b>A.Y. 2021-22</b>		
1.	Sanjay J. Dhoble, Toshi S. Dhapodkar, <b>Abhijeet R. Kadam</b> , Radhika G. Deshmukh, Nayana S. Shirbhate, A Highly Efficient Far Red Emitting $\text{Mg}_{21}\text{Ca}_4\text{Na}_4(\text{PO}_4)_{18}:\text{Ce}^{3+}, \text{Eu}^{3+}$ Phosphor For Plant Cultivation, P. No: 2022/01063	Utility	Granted
2.	Sanjay J. Dhoble, Ramkumar B., Kamble <b>Abhijeet R. Kadam</b> Vibha Chopra, RGB emission and solar efficiency enhancement in $\text{Eu}^{3+}$ , $\text{Tb}^{3+}$ co-activated $\text{K}_2\text{NaAlF}_6$ down conversion phosphors by energy transfer mechanism, P. No. 2021102302	Utility	Granted
3.	Samirkumar R., Bhelave, <b>Abhijeet R. Kadam</b> , Atul N. Yerpude, Sanjay J. Dhoble, Synthesis of $\text{Eu}^{3+}$ - $\text{Tb}^{3+}$ activated/co-activated $\text{Ca}_{14}\text{Zn}_6\text{Al}_{10}\text{O}_{35}$ white light emitting phosphors, P. No. 2021101716	Utility	Granted
4.	<b>Abhijeet R. Kadam</b> , Digambar A. Ovhal, Nirupama S. Dhoble, Sanjay J. Dhoble, A solar cell efficiency enhancement by downshifting layer of $\text{KAlF}_4:\text{DY}^{3+}, \text{EU}^{3+}$ co-activated	Utility	Granted



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	downconversion phosphor as spectral converters, P. No.: 2021102696		
5.	Toshi S. Dhapodkar, <b>Abhijeet R. Kadam</b> , Nameeta Brahme and S. J. Dhoble, Synthesis and luminescence investigation of $Mg_{21}Ca_4Na_4(PO_4)_{18}$ : $Dy^{3+}$ , $Tb^{3+}$ , $Eu^{3+}$ triple doped glasses for WLEDs and solar cell efficiency enhancement, P. No.: 202221006510 A	Utility	Published
	<b>A.Y. 2020-21</b>		
1.	<b>A.R. Kadam</b> , Girish C. Mishra, S. J. Dhoble, Process for synthesis of $Ce^{3+}$ , $Eu^{2+}$ co-doped $BaSiF_6$ phosphor, P. No. 350918	Utility	Granted
2.	Kena J. Shukla, <b>A. R. Kadam</b> and S. J. Dhoble, System for energy harvesting, P. No. : 202021006706 A	Utility	Published
3.	<b>Abhijeet R. Kadam</b> , Swati A.Fartode, Samiksha B.Dhoble, Sanjay J.Dhoble, A thermoluminescence biomaterial for high radiation dose dosimetry and method of preparation thereof, P. No.: 202021053087 A	Utility	Published