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## Design and Fabrication of IoT Enabled Air Purification System

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**Abstract:** In most metro centres, the incidence of dust pollution is rapidly growing, necessitating the installation of a system that can filter the air. This study offers the concept of a smart air purifier for residential settings, as well as a practical physical model. The filter employed in this case is a HEPA filter, which captures solid pollutants and cleanses them, reducing VOC pollutants more effectively than other purifiers on the market. This purifier is controlled by an IoT system, which allows it to run automatically and save energy while also displaying real-time data on impurities in the environment.

**Keywords:** IoT, HEPA filter, optical dust sensor, Arduino Uno

## REFERENCES

- [1]. Tazin Shaikh, Sameer Pathan, Sururahemad Shaikh,"IOT Based Smart Air Purifier", International Journal for Research in Applied Science & Engineering Technology (IJRASET).
- [2]. Akanksha Dhamija, Pratyaksh Kumar, Raman Raghav, Mayank Suhag, "PureLiv: Smart Indoor Air Quality Monitoring and Purifying System ".International Research Journal of Engineering and Technology (IRJET) Volume: 06 Issue: 04 | Apr 2019.
- [3]. M.F.M Firdhous, B.H Sudantha, P.M Karunaratne, "IoT enabled proactive indoor air quality monitoring system for sustainable health", Computing and Communications Technologies (ICCCT), 2017 2nd International Conference.
- [4]. R du Plessis, A Kumar, GP HanckeYonggao Yang, Lin Li, "A wireless system for indoor air quality monitoring", Industrial Electronics Society, IECON 2016 42nd Annual Conference of the IEEE
- [5]. H. Ali, J. K. Soe, Steven. R. Wel," A real-time ambient air quality monitoring wireless sensor network for schools in smart cities", Smart Cities Conference (ISC2), 2015 IEEE First International.
- [6]. Sneha Jangid, Sandeep Sharma," An embedded system model for air quality monitoring", Computing for Sustainable Global Development (INDIACom), 2016 3rd International Conference.
- [7]. Sujuan Liu, Chuyu Xia, Zhenzhen Zhao," A low-power real-time air quality monitoring system using LPWAN based on LoRa", Solid-State and Integrated Circuit Technology (ICSICT), 2016 13th IEEE International Conference.
- [8]. Xiaoke Yang, Lingyu Yang, Jing Zhang," A WiFi-enabled indoor air quality monitoring and control system", Control & Automation (ICCA), 2017 13th IEEE International Conference.

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