

INTERNET OF THINGS-BASED AIR QUALITY ANALYSIS FOR MONITORING CO₂ CONCENTRATION IN ROOFTOP BUILDING AREAS

Researcher

R. Deasy Mandasari, M.T.
Ir. Andi Rosano, M.T.
Ir. Djadjat Sudaradjat, M.T.

1



2

Funding

Yayasan Bina Sarana Informatika



Summary

This Jakarta study focused on rooftop air quality, highlighting CO₂ levels. It found that rooftop gardens had significantly lower CO₂ levels (295 PPM) compared to regular rooftops (360 PPM), suggesting their effectiveness in CO₂ reduction through IoT technology and CO₂ sensors.

3



4

Result

The effectiveness of IoT technology and CO₂ sensors in monitoring rooftop CO₂ concentration is evident. Rooftop gardens show promise in reducing CO₂ levels, indicating their potential for design implementation.



Innovative Technologies

IoT technology enables real-time CO₂ monitoring on building rooftops using MQ-135 sensors for CO₂ measurement and DHT22 sensors for temperature and humidity. Data is transmitted wirelessly via Wi-Fi NodeMCU ESP 8266 12E and displayed on a 16x2 LCD screen.

5



<https://quakewarn.cloud/co2/grafik/>
Hibah Penelitian Dosen Yayasan Tahun 2023