

## Image References

### Home Page

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[https://commons.wikimedia.org/wiki/File:Black\\_Rock\\_State\\_Park\\_Black\\_Rock\\_Scenic\\_View\\_Looking\\_North\\_off\\_Mattatuck\\_Trail.jpg](https://commons.wikimedia.org/wiki/File:Black_Rock_State_Park_Black_Rock_Scenic_View_Looking_North_off_Mattatuck_Trail.jpg)
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- Sensor Circuit – by Fritzing - [Creative Commons Attribution-Share Alike 3.0 Unported license]  
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### Build Your Sensor

- Particulate matter – by Ji-Elle – [public domain]  
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- Nitrogen oxides – by Wurstsalat – [Creative Commons Attribution-Share Alike 3.0 Unported license] and [GNU Free Documentation License] <https://commons.wikimedia.org/wiki/File:Santiago30std.jpg>

### The Circuit

- Circuit Images – by Fritzing - [Creative Commons Attribution-Share Alike 3.0 Unported license]  
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### The App

- Android – by Ryry17354 – [Creative Commons Attribution 2.5 Generic license]  
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### The Thin Layer that Supports Life

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- Background of smoke – By Sergeev Pavel – [public domain]  
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### How do Air Pollutants Impact my Environment?

- Tropical Forest – by Frameme – [Creative Commons Attribution-Share Alike 3.0 Unported license] and [GNU Free Documentation License]  
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### Where am I exposed to Air Pollutants in my Daily Life?

- Los Angeles Panorama – by Matthew Field – [Creative Commons Attribution-Share Alike 3.0 Unported license]  
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## Content References

- American Chemical Society. *Chemistry in Context*, 9<sup>th</sup> ed.; McGrawHill: New York, 2018
- <https://www.space.com/17638-how-big-is-earth.html> (accessed August 31, 2017)
- <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#effects> (accessed August 31, 2017)
- <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects> (accessed August 31, 2017)
- <https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects> (accessed August 31, 2017)
- <https://www.epa.gov/co-pollution> (accessed August 31, 2017)
- <https://www.epa.gov/ozone-pollution> (accessed August 31, 2017)
- <https://www.epa.gov/lead-air-pollution> (accessed August 31, 2017)
- <http://www.ec.gc.ca/toxiques-toxics/default.asp?lang=En&n=D048E4B9-1> (accessed August 31, 2017)
- <http://aqicn.org/sensor/shinyei/> (accessed August 31, 2017)
- <http://www.futureelectronics.com/en/optoelectronics/optical-sensors-and-switches.aspx> (accessed August 31, 2017)
- [http://takingspace.org/wp-content/uploads/ShinyeiPPD42NS\\_Deconstruction\\_TracyAllen.pdf](http://takingspace.org/wp-content/uploads/ShinyeiPPD42NS_Deconstruction_TracyAllen.pdf) (accessed August 31, 2017)
- <https://www.arduino.cc/en/Guide/Introduction> (accessed August 31, 2017)
- <https://www.arduino.cc/en/Guide/BoardAnatomy> (accessed August 31, 2017)
- Chen, R.; Hu, B.; Liu, Y.; Xu, J.; Yang, G.; Xu, D.; Chen, C. Beyond PM2.5: The role of ultrafine particles on adverse health effects of air pollution. *BBA - General Subjects* **2016**, 1860, 2844-2855.
- Snider, G.; Weagle, C. L.; Murdymootoo, K. K.; Ring, A.; Ritchie, Y.; Stone, E.; Walsh, A.; Akoshile, C.; Nguyen, X. A.; Balasubramanian, R.; Brook, J.; Qonitan, F. D.; Dong, J.; Griffith, D.; He, K.; Holben, B. N.; Kahn, R.; Lagrosas, N.; Lestari, P.; Ma, Z. Variation in global chemical composition of PM2.5: emerging results from SPARTAN. *Atmospheric Chemistry & Physics* **2016**, 16, 9629-9653.
- Kang, P.; Guo, Y.; Hong, S.; Feng, N.; Christopher, S. A.; Zhan, F. B. Satellite remote sensing of fine particulate matter (PM 2.5) air quality over Beijing using MODIS. *Int. J. Remote Sens.* **2014**, 35, 6522-6544.
- Lu, Q.; Zheng, J.; Ye, S.; Shen, X.; Yuan, Z.; Yin, S. Emission trends and source characteristics of SO<sub>2</sub>, NO<sub>x</sub>, PM10 and VOCs in the Pearl River Delta region from 2000 to 2009. *Atmos. Environ.* **2013**, 76, 11-20.
- Zyrichidou, I.; Koukouli, M. E.; Balis, D.; Markakis, K.; Poupkou, A.; Katragkou, E.; Kioutsioukis, I.; Melas, D.; Boersma, K. F.; van Roozendael, M. Identification of surface NO<sub>x</sub> emission sources on a regional scale using OMI NO<sub>2</sub>. *Atmos. Environ.* **2015**, 101, 82-93.
- Masson, N.; Piedrahita, R.; Hannigan, M. Approach for quantification of metal oxide type semiconductor gas sensors used for ambient air quality monitoring. *Sensors & Actuators: B. Chemical* **2015**, 208, 339-345.
- Haugen, J.; Tomic, O.; Kvaal, K. A calibration method for handling the temporal drift of solid state gas-sensors. *Anal. Chim. Acta* **2000**, 407, 23-39.