[1]

J. Koiwanit, “Analysis of environmental impacts of drone delivery on an online shopping system,” *Advances in Climate Change Research*, vol. 9, no. 3, pp. 201–207, Sep. 2018, doi: [10.1016/j.accre.2018.09.001](https://doi.org/10.1016/j.accre.2018.09.001).

This study presents a life cycle assessment study on drone delivery in Thailand using CML2001, the life cycle impact assessment (LCIA) method, to convert life cycle inventory data into environmental impacts. The observed results show that an online shopping system using drone delivery is one of the most environmentally friendly transportation options throughout a wide range of scenarios. However, the production of the parts contributed to significant impacts on environmental issues while the drone operation showed the least

impact on all impact categories.

[2]

Y. Zhang and D. Liu, “Influences of initial launch conditions on flight performance of high altitude balloon ascending process,” *Advances in Space Research*, vol. 56, no. 4, pp. 605–618, Aug. 2015, doi: [10.1016/j.asr.2015.04.031](https://doi.org/10.1016/j.asr.2015.04.031).

In this paper, A novel A dynamic model was established to describe thermodynamic and kinetic characteristics of the balloon which consists of atmospheric, thermal, and dynamic submodels. Based on the model, ascending processes of a high altitude balloon under different initial launch conditions were simulated. The initial launch conditions were classified into three types: inflating quantity, launch time, and launch position. The ascending velocity and the differential pressure were defined and used as evaluation parameters of flight performance. Results showed that the inflating quantity is the most effective factor for the ascending process, and the upper and lower limits were also proposed separately from safety and performance perspectives.

[3]

Y. Bestaoui Sebbane *et al.*, *Lighter than Air Robots*, vol. 58. Dordrecht: Springer Netherlands, 2012.

This textbook examines Lighter Than Air Robot, unmanned lighter than air vehicles with sufficient autonomy. It teaches how Lighter than air systems are particularly appealing since the energy required to keep them airborne is small. The Lift of the lighter than air robot is mainly aerostatic, as opposed to aerodynamics as in airplanes and helicopters. Consequently, lighter than air robots spend most energy moving and compensating for wind disturbances, rather than trying to keep themselves on air.

[4]

M. Rogulski, “The use of low-cost measuring devices for testing air quality in hard-to-reach locations,” *E3S Web Conf.*, vol. 44, p. 00151, 2018, doi: [10.1051/e3sconf/20184400151](https://doi.org/10.1051/e3sconf/20184400151).

This article examines the Air quality assessment traditionally carried out by ground monitoring. With the development of technology and the creation of small, low-cost sensors. The results show it became possible to effectively study lower tropospheric layers by using light aircraft and balloons. The article presents the use of designed small, portable devices using low-cost dust sensors to research air pollutants using a hot air balloon. The results of measurements of PM1 concentration using tethered balloon flights and during a free flight they found where a balloon with a measuring device can be an effective transport medium for analyzing the vertical spread of particulate matter and other gases in the atmosphere. Higher altitude tests can be conducted during a free flight, while for lower altitudes a better solution is to use a tethered balloon.

[5]

M. Sato, M. Nirei, Y. Yamanaka, T. Suzuki, Y. Bu, and T. Mizuno, “Increasing the efficiency of a drone motor by arranging magnetic sheets to windings,” *Energy Reports*, vol. 6, pp. 439–446, Feb. 2020, doi: [10.1016/j.egyr.2019.11.100](https://doi.org/10.1016/j.egyr.2019.11.100).

In this article, a study was conducted that experimented on drone motors, using magnetism to improve the efficiency of the motors by surrounding a specific part of the motor with sheets. These sheets provide a magnetic field that lessens the magnetic flux leakage of the motor itself, which reduces heat dissipation and power loss due to it. This article shows how the magnetic field can reduce the electrical resistance and improve the thermal conductivity of the materials that make up some parts of the inside of the motor. This article can help us with our project by providing us with a method of understanding the magnetic fields and the possible interference of the carriable magnetometer of our drone.

[6]

S. Yadav, “THRUST EFFICIENCY OF DRONES (QUAD COPTER) WITH DIFFERENT PROPELLERS AND THERE PAYLOAD CAPACITY,” vol. 4, p. 6, 2017.

Drones are studied in this article with the purpose of mechanically improving payload capacity and power efficiency of drones by using different thrust levels in different rotors of tri-copters and quad-copters individually. We can see different propellers placed in different configurations on drones can improve the total thrust and lift provided, which will allow the drone to have an increased payload capacity with an optimized propellor setup. The placement and usage of these different propellers will also provide different power consumption values, which can help us with the power load of the propellers while also taking the drone’s controls into consideration.

[7]

R. W. Beard and T. W. McLain, *Small unmanned aircraft: theory and practice*. Princeton, N.J: Princeton University Press, 2012.

This book prepares the reader to do research in the rapidly developing field of autonomous navigation, guidance, and control of unmanned air vehicles. The focus is on the design of the software algorithms required for autonomous and semiautonomous flight. It goes over the necessary information researchers must be familiar with to work in this area, a wide range, including coordinate transformations, aerodynamics, autopilot design, state estimation, path planning, and computer vision. The aim of this book is to cover these essential topics, focusing in particular on their application to small and miniature air vehicles, which we denote by the acronym MAV.

[8]

A. Prystai, V. Korepanov, F. Dudkin, and B. Ladanivskyy, “Vector Magnetometer Application with Moving Carriers,” vol. 207, no. 12, p. 7, 2016.

This article discusses interference in fluxgate magnetometers (FGM) attached to a drone. During movement of FGM fixed to a drone practically permanent attitude changes in the Earth’s magnetic field arises with corresponding changes of its projection at FGM axes. Also the electromagnetic interference from the drone motor and uncontrolled oscillations of drone and suspension are the factors which limit the magnetometer sensitivity level. Aroused because of this, signals significantly exceed the expected signals from a studied object and so should be removed by proper interference filtration and use of stabilized towed construction, as well as at data processing. The article discusses how its model trys to solve these problems.

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<https://www.youtube.com/watch?v=NGi7KjvR66M>

<https://www.flyzipline.com/how-it-works/>

<http://www.cns.gatech.edu/~predrag/courses/PHYS-4421-13/Lautrup/buoyancy.pdf>

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