Mohmmadazhar Khalifa
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Mobile Apps II

Week 4 Summaries

Article 1: This bizarre looking helmet can create better brain scans

A helmet that can work to boost MRI machines and develop even cleaner images at double the normal speed was developed by Xin Zhang, a College of Engineering professor of mechanical engineering at Boston University, and her team. By using metamaterials, which are made of unit cells, they can be grouped together to do spectacular things such as being able to bend, absorb, and manipulate electromagnetic and different types of waves. The use of metamaterials demonstrated by Zhang is of an acoustic metamaterial that can block sound without preventing airflow and now wearable metamaterial that can be worn during brain scans. By using the helmet in conjunction with a cheaper low-field MRI machine, it can cut down the cost of MRI scanning.

Article 2: Game-Changing Carbon Capture Technology To Remove 99% of CO2 From Air

Published in the *Nature Energy*, Professor Yushan Yan and his research team developed technology that can capture 99% of the CO2 in the air with the use of hydrogen. The idea was sparked when it was realized that the defect of hydrogen exchange membrane (HEM) being sensitive to CO2, could be useful for carbon dioxide elimination. The fuel cells' ability to capture even small amounts of carbon dioxide that came into contact separated. With this logic, the team designed a filtration membrane system that could capture large amounts of carbon dioxide every minute. The device is made so that the wires are incorporated inside the device, enabling the carbon dioxide particles to move faster. This also allowed for a more compact device with a large surface area which can filter greater volumes of air. The technology can be implemented in a device as small as a can of coke or even a gallon of milk in the case of automotive. The future of carbon capture can be seen in spacecraft and submarines where filtration is necessary.

Bibliography

@misc{university_2022, title={This bizarre looking helmet can create better brain scans}, url={https://www.sciencedaily.com/releases/2022/02/220211102727.htm}, journal={ScienceDaily}, publisher={ScienceDaily}, author={University, Boston}, year={2022}, month={Feb}, abstract={This article is of interest because it is am advancement in the medical field that can further aid in better treatment for patients and this approach can also be used in developing countries at a lower cost}}

@misc{university of delaware_2022, title={Game-changing carbon capture technology to remove 99% of CO2 from Air}, url={https://scitechdaily.com/game-changing-carbon-capture-technology-to-remove-99-of-co2-from-air/}, journal={SciTechDaily}, author={UNIVERSITY OF DELAWARE}, year={2022}, month={Feb} abstract={This article is of interest because the carbon dioxide capturing system can prove to be useful in areas where co2 emission is greater and can help eliminate carbon dioxide for better quality air to protect our health}}