

Gas sensors: Tec students published in international journal



Rodrigo Correa and Grecia Ramírez, students at the **Tec's State of Mexico campus**, wrote an article about efficient and accessible ways to **produce gas sensors which detect environmental pollutants** that was published in the international ***Journal of Material Science: Materials in Electronics***.

The ***Journal of Materials Science: Materials in Electronics*** is a highly regarded peer-reviewed **international journal** in the field of materials science, which publishes research on materials in electronic devices.

After ten months of research, the **Nanotechnology** Engineering students and their advisors managed to have an article accepted for publication in this **international journal**.

This publication represents **Tec de Monterrey's first contribution to the journal**.

"As undergraduate students, it's extremely gratifying that our work has been valued and accepted by experts in the field." – Grecia Ramírez

Impact of the line of research

The research focuses on the synthesis, characterization, and modeling of **thin film-based sensors for the detection of gases**, in this case carbon **monoxide (CO)**.

*“Efficient and accurate detection of CO is **crucial because of its toxic nature and lethal potential**,”* said Grecia Ramirez.

The students’ work not only touches on the field of semiconductor materials and sensor technology but also **environmental protection** and the **development of sustainable technologies**.

*“This contributes to existing knowledge while **opening up new lines of research** which, directly or indirectly, are important to society given the practical impact of addressing a **critical problem for public health and safety**,”* said Professor Brenda García, co-advisor to the project.

The research focuses on sensors to detect carbon monoxide (CO). Photo: Shutterstock



The inspiration behind the research

The students explained that the inspiration for this research **came about after their supervisor suffered an illness** which required him to be in spaces with a high concentration of oxygen.

Creating these sensors in an accessible and scalable way not only promotes **environmental protection** but also provides an effective solution to monitoring health conditions, such as those of their professor.

This project took approximately 10 months from the creation of the research questions to correction and submission of the final manuscript. The team said that one of the biggest challenges during this time was analyzing the large volume of results obtained during experimentation.

*“This milestone is a **tangible reflection of the effort**, dedication, and countless hours of work invested in the **research**,”* Correa added.

Their efforts paid off when their research was selected to be published in the ***Journal of Material Science: Materials in Electronics***.

“As undergraduate students, it’s extremely gratifying that our work has been valued and accepted by experts in the field,” concluded Grecia.

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