COVER IMAGE

In this Insight we look at how nanotechnology can help accelerate the development of clean technologies for personal transportation.

IMAGE: YUJI SAKAI / DIGITALVISION / GETTY IMAGES

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Nanotech in motion

Environmental, political and public health concerns are pushing the automotive industry to develop profitable green technologies. In this Insight, we look at how nanotechnology is contributing to the cause.

Three pieces focus on battery nanomaterials, scalable production of hydrogen and a possible alternative for platinum-group-free membranes for fuel cells. A further Perspective deals with nanocomposites for vehicle weight reduction.

If the goal is to limit CO₂ emissions, it is important to choose nanomaterials with low environmental impact. We present an Analysis in which environmental scientists teaming up with materials scientists have sifted through an extensive literature and

tried to identify which nanomaterials have the highest climate change mitigation potential.

Finally, when talking about automobiles, one cannot escape racing. Two pieces report on Formula E and on a student project to build competitive fuel-cell racing cars.

Although all the pieces are written by academics and focus on fundamental aspects, they have been conceived and edited in the hope that individuals involved in policy making, environmental monitoring and industry research & development will be able to appreciate the opportunities that a nanoscale understanding of batteries, fuel cells and composite materials can offer to accelerate the development of electric vehicles.

Alberto Moscatelli, Senior Editor

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