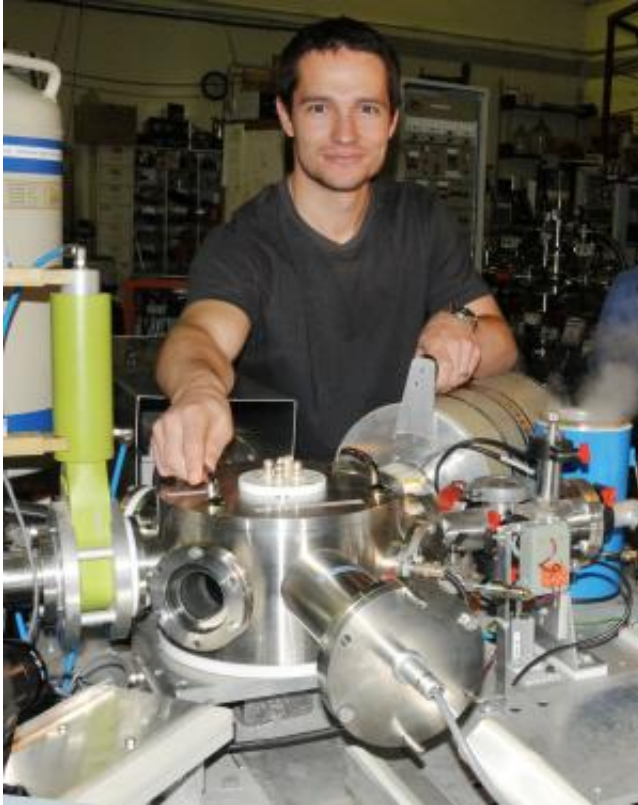


Wood burning fires a winter health hazard

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Research by a Victoria University student shows that particulate matter from wood burning fires is a winter health hazard in New Zealand.

The research by Canadian-born Travis Ancelet, who graduates from Victoria University with a PhD in Chemistry next week, has implications for health and safety both in New Zealand and overseas.

"If we can better understand what's driving air pollution, then we can significantly improve air quality and [health outcomes](#)," says Travis.

"On the totem pole of environmental responsibility, people think burning wood is better than other options, such as electricity or gas central heating, particularly when they don't involve deforesting huge amounts of habitation. But wood burning is a significant contributor to air pollution," says Travis.

Travis didn't expect his research results to show that, particularly in Auckland, wood burning fires contributed more [particle pollution](#) than [vehicle emissions](#) in the winter months.

"That was a surprise, especially because most people think [road transport](#) is the leading cause of air pollution."

Travis's research also identified the time of day that the worst pollution from wood burning occurs.

His study focused on airborne [particle emissions](#) in four New Zealand centres – Masterton, Alexandra, Nelson and Auckland – over two-month periods during winter to assess how air pollution changed by the hour.

A number of samplers were used to record results, mainly at sites where local councils were already monitoring air pollution.

"We also located samplers about a kilometre upwind and downwind of these sites, as well as at height, to assess how particle concentration varied according to where people lived."

While he anticipated results would show an upswing in the evening when residents got home from work, he didn't expect [particle concentrations](#) to increase in the morning.

"It indicated that some people light the fire when they get up."

Travis hopes his research will make a tangible difference to air quality in New Zealand. As part of his job at GNS Science, he is working alongside a number of regional councils to help them better understand air pollution issues and meet their environmental commitments set by the Ministry for the Environment.

He is also expanding his research to include the sources and impacts of other toxic pollutants on air quality in other New Zealand locations.

Provided by Victoria University

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