GIRLS IN PHYSICS

BREAKFAST

GEELONG 2025

VicPhys

How Important are Powders?

Dr Negin Amini
Associate Investigator
COEMinerals

Rethinking Waste: Engineering a Circular Future

Dr Sirjana Adhikari
Associate Research Fellow
COEMinerals

Meet like-minded students and women who have a career in Physics and Engineering. Ask questions and explore different pathways that might work for you!

FOR STUDENTS IN YEARS 10,11 & 12 INTERESTED IN A CAREER IN STEM

Thursday August 14, 2025
Waurn Ponds Estate,
Nicole Drive South, Waurn Ponds

$15 per student
(Max. 12 Students per school)
Breakfast 8.30am to 11.00am

SCAN FOR MORE INFO

Speak to your science teacher about attending the breakfast

"I was talking to a guest at my table and her career sounded so amazing. Then I realised that in eight years that could be me. I got so excited!" - Year 10 Student

SPONSORED BY

VicPhys
Vicphysics Teachers' Network Inc.

The INVERGOWRIE Foundation

GIRLS IN PHYSICS

BREAKFAST

GEELONG 2025

Dr Negin Amini
Associate Investigator
COEMinerals

Dr Sirjana Adhikari
Associate Research Fellow
COEMinerals

How Important are Powders?

Speaker Bio: Dr Negin Amini, Associate Investigator COEMinerals
Dr Negin Amini is a Lecturer in Environmental Engineering at Deakin University Burwood campus. Negin worked for a few years as regulatory compliance advisor before going back to University to do her PhD. She gained her PhD from Monash University where she investigated energy efficient ways to unlock the sugars inside wood for biofuels production. Since then, she joined Deakin where she explored different fields of inter-disciplinary projects. Now, she is an Associate Investigator in the ARC Centre of Excellence for Enabling Eco-efficient Beneficiation of Minerals (COEMinerals). Her research is on developing and testing recyclable materials for the capture of fine mineral particles.

Abstract: Have you ever thought about the number of different applications powders are used for? Things like instant coffee, detergents, and make-up to name a few.... All these products require chemical engineers to design equipment that allows powders to be processed to keep their nutrients, shape or whatever important characteristic that product needs. In my presentation you will learn about that and my career pathway. I'll discuss how I use powders in my research, from 3D printing to minerals processing. I'll also talk about what it's like to be a chemical engineer and the types of jobs you can do by studying STEM subjects like chemistry and maths.

Rethinking Waste: Engineering a Circular Future

Speaker Bio: Dr Sirjana Adhikari, Associate Research Fellow COEMinerals
Dr. Sirjana Adhikari completed a Bachelor's and Master's of Environmental Science in Nepal and moved to Australia in 2017. She completed her Master's by Research at RMIT in 2019 and recently completed her PhD in Environmental Engineering at Deakin University. Currently, Sirjana is an Associate Research Fellow in minerals processing and works at the Centre of Excellence for Enabling Eco-efficient Beneficiation of Minerals (COEMinerals). Sirjana collaborates across academia and industry, contributing to impactful projects on sustainability. Her research is also widely recognised through prestigious awards, including the Biochar Student Prize 2022 from the Australia New Zealand Biochar Industry Group. Her global reach extends beyond academic journals; her recent article in The Conversation has been read nearly 11,000 times globally and republished by 35 outlets. Driven by a passion for sustainable innovation, Sirjana is dedicated to advancing research and mentoring the next generation of environmental leaders.

Abstract: Our planet provides us with the essential resources we need to live, and we've created amazing technologies to make our lives easier. But it's also important to think about using these resources in ways that don't harm the environment. A "circular" approach means reusing materials in a continuous loop, rather than throwing them away. This idea of circularity can apply to the waste we create, whether it's from our homes or even from large industries like mining. Researchers in engineering have found innovative ways to turn this waste into valuable new products. By working together to create sustainable and circular solutions, we can help protect our planet for the future.

SPONSORED BY

VicPhys
Vicphysics Teachers' Network Inc.

The INVERGOWRIE Foundation