

**Pacific
Northwest**
NATIONAL LABORATORY

**Science is Impactful.
Science is Beautiful.
*Science is for Everyone.***

Operational efficiency is critical when cleaning up radioactive material. Researchers at PNNL are performing studies to help engineers solve potential filtration issues from solids that build up in the pipes when moving materials to processing facilities. Shown here is a type of zeolite mineral that can form, called Cancrinite. Running these experiments helps engineers anticipate problems and plan accordingly.

www.pnnl.gov/stem-education

PNNL-SA-167390



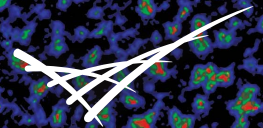
**Pacific
Northwest**
NATIONAL LABORATORY

Science is Impactful.
Science is Beautiful.
Science is for Everyone.

Sustainable production of fuels and chemicals requires efficient methods for the break down and conversion of crude biomass into valuable chemicals. Researchers at PNNL are working to discover new methods to implement organisms, such as the anaerobic gut fungi shown here, which possess enzymes that can help to establish more efficient processes.

www.pnnl.gov/stem-education

PNNL-SA-167390



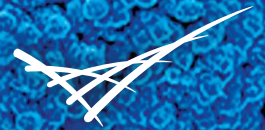
**Pacific
Northwest**
NATIONAL LABORATORY

**Science is Impactful.
Science is Beautiful.
*Science is for Everyone.***

Researchers at PNNL are investigating how to gain a better understanding of molecular-level electrochemical processes. These processes are essential to designing sustainable technologies for energy generation, conversion, and storage. Shown here are flower-like mesoscale assemblies.

www.pnnl.gov/stem-education

PNNL-SA-167390



**Pacific
Northwest**
NATIONAL LABORATORY

**Science is Impactful.
Science is Beautiful.
*Science is for Everyone.***

Researchers at PNNL are studying the capture of CO₂ by subsurface basaltic rocks to help mitigate the increasing CO₂ levels in the atmosphere. Shown here are basalt rocks converting CO₂ into calcium carbonate nodules.

www.pnnl.gov/stem-education

PNNL-SA-167390