Science Daily reports:

Researchers at Oregon State University and the Pacific Northwest National Laboratory have discovered a new way to apply nanostructure coatings to make heat transfer far more efficient, with important potential applications to high tech devices as well as the conventional heating and cooling industry.

These coatings can remove heat four times faster than the same materials before they are coated, using inexpensive materials and application procedures.

Not every technological innovation makes it from the lab to the production line. But increases in heat transfer efficiency could improve the energy efficiency of cooling systems as well as of energy production systems that convert heat to power.

Nanotech is largely uncharted territory and a close look at the safety of the materials is in order. Nevertheless, this could be a very promising development — not only in terms of climate change, but also in reducing conventional air pollution from the electricity sector by decreasing the amount of fuel needed to fill the need of users.