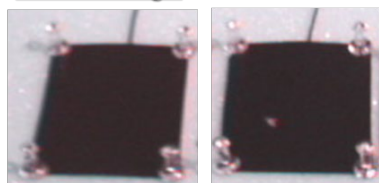


Control of Radiative Transfer by Nano-particulate media

Associate professor **Hiroki Gonome**

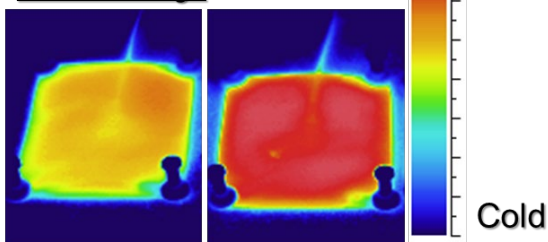
Visual image



Cool black coating

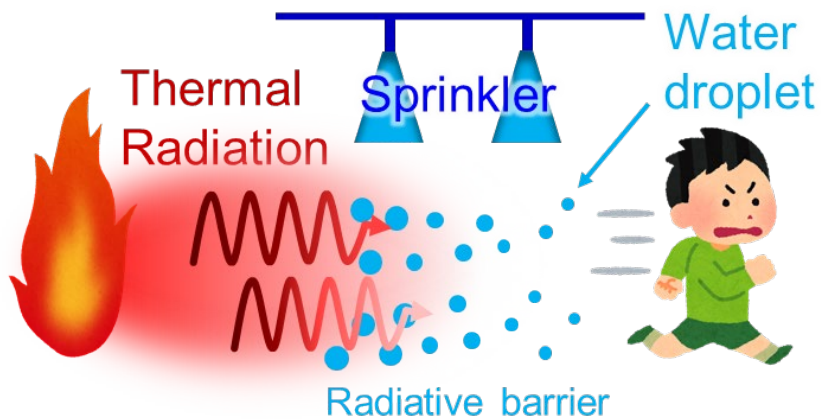
Typical black paint

Infrared image



Hot

Cold



Content:

We control the radiative transfer by nano-particulate media.

Case 1 : Cool black coating (Paints)

We develop the black coating which reflects invisible near infrared light. It is 10 °C cooler than the typical black paint.

Case 2 : Thermal barrier sprinkler (Extinguishing fire)

Fire disaster spread by thermal radiation. We develop thermal barrier sprinkler by optimizing micro water droplet.

Case 3 : Thermal Design of Spacecrafts (Space technology)

In the vacuum environment of space, radiative control is important in the thermal design. We are working with JAXA.

Appealing point:

We are working hard to make sure that we will be able to take an active role as a top runner in Japan's research level. We are actively engaged in industry-university collaboration.

Yamagata University Graduate School of Science and Engineering

Research Interest : Heat transfer

E-mail : gonome@yz.yamagata-u.ac.jp

Tel : +81-238-26-3103

HP : <http://gonome-lab.yz.yamagata-u.ac.jp>

