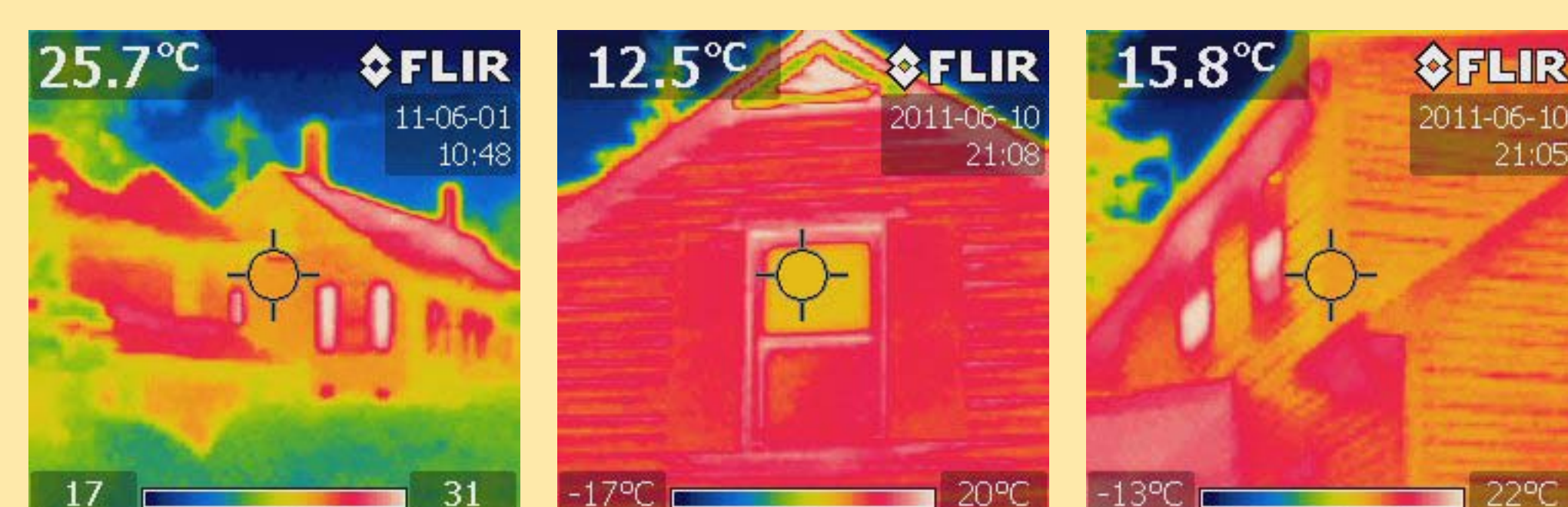


The Infrared Visualization of the Real World

Charles Xie, The Concord Consortium, Concord, MA, USA

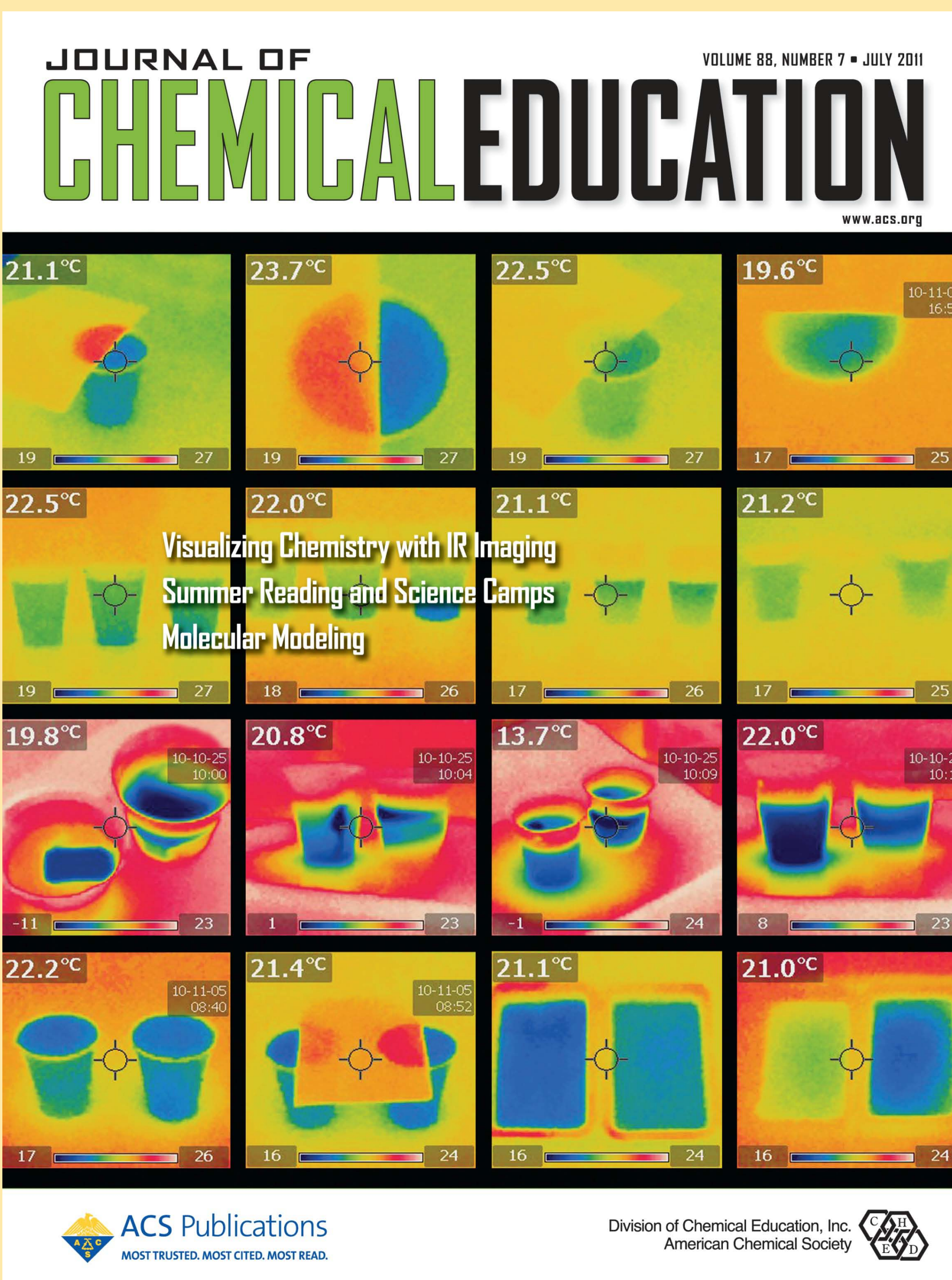
qxie@concord.org

Just an energy auditing tool?



Absolutely not!

It is a real-time visualization tool for real-world processes.



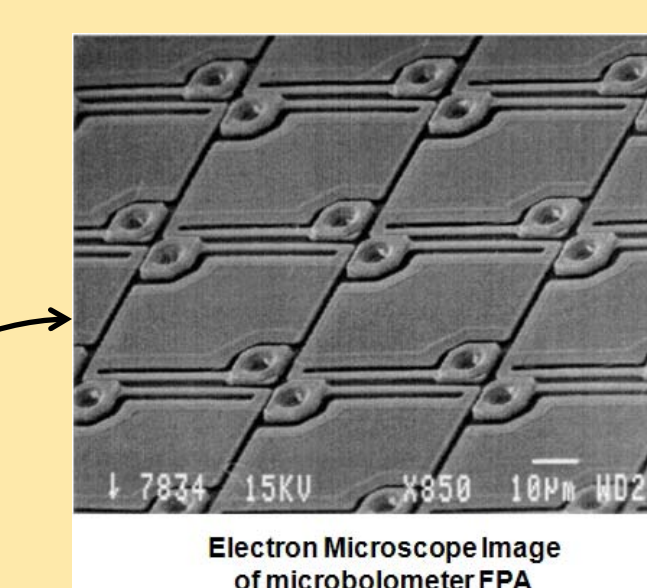
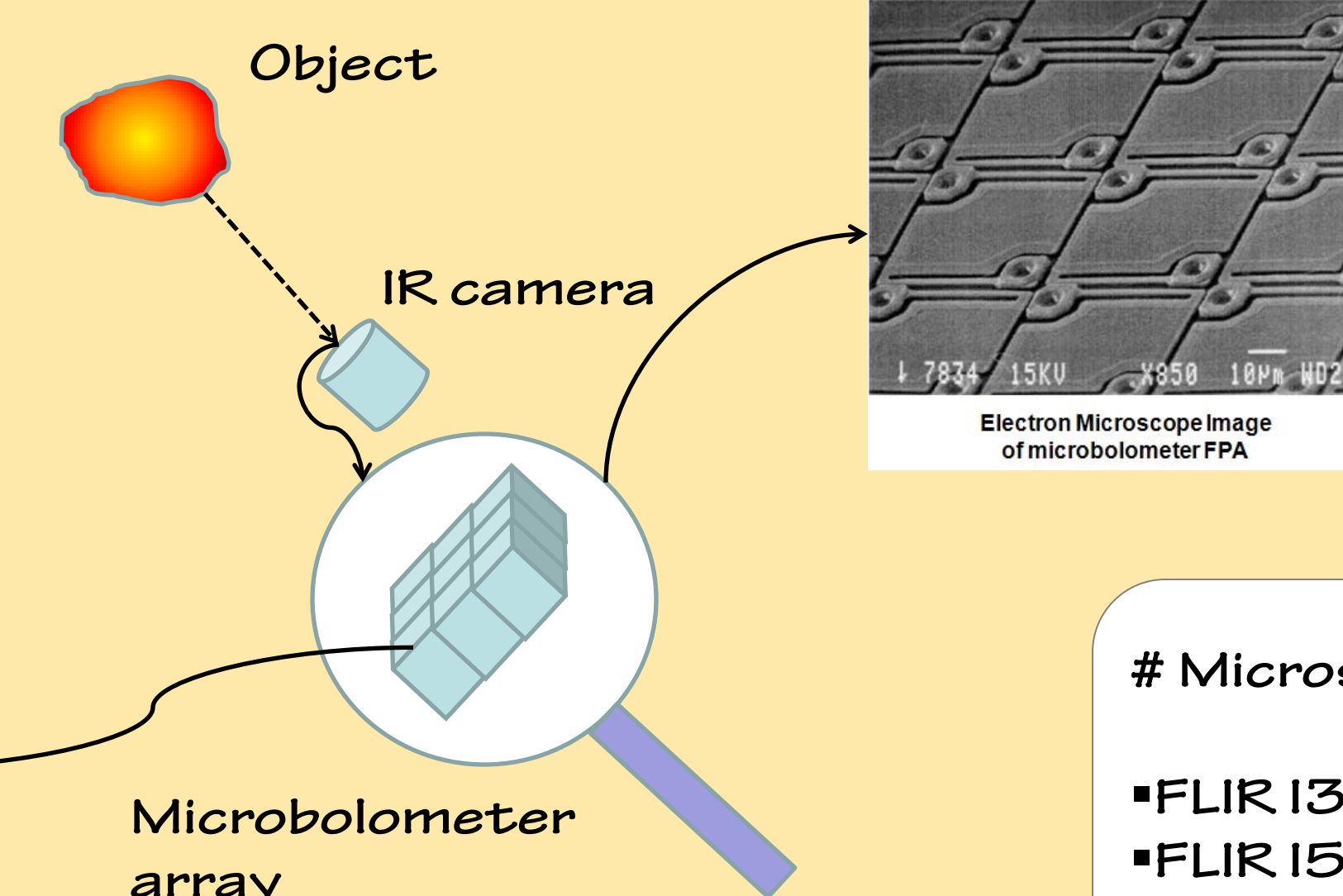
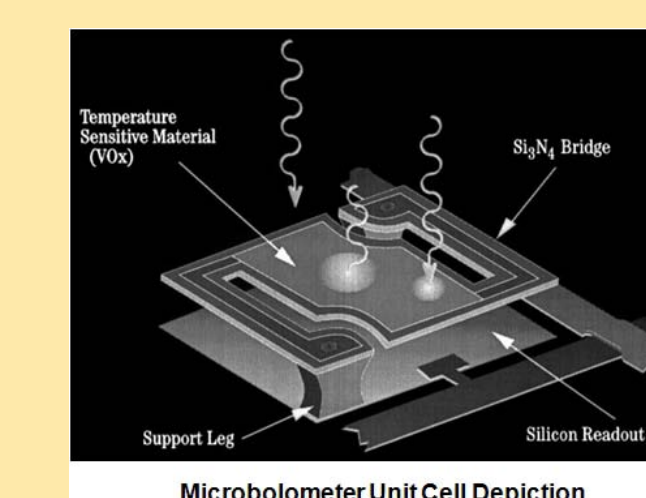
Multisensory learning in the lab:
Augmenting visualization to
hands-on experiments



Stefan-Boltzmann's Law:

$$P = \epsilon \sigma A T^4$$

P - radiation power
 ϵ - emissivity
T - temperature
A - area
 σ - Stefan constant

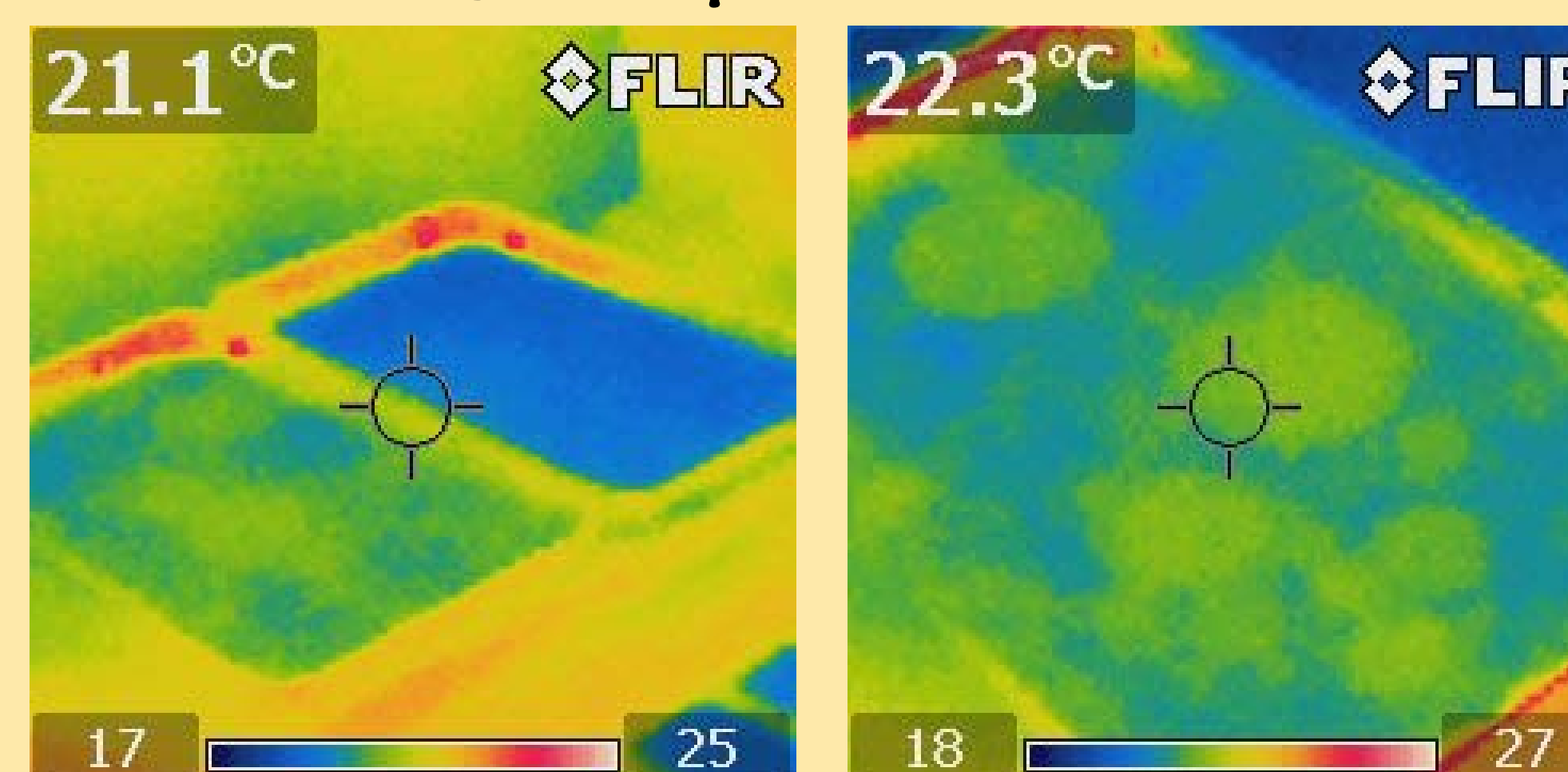


Microsensors:

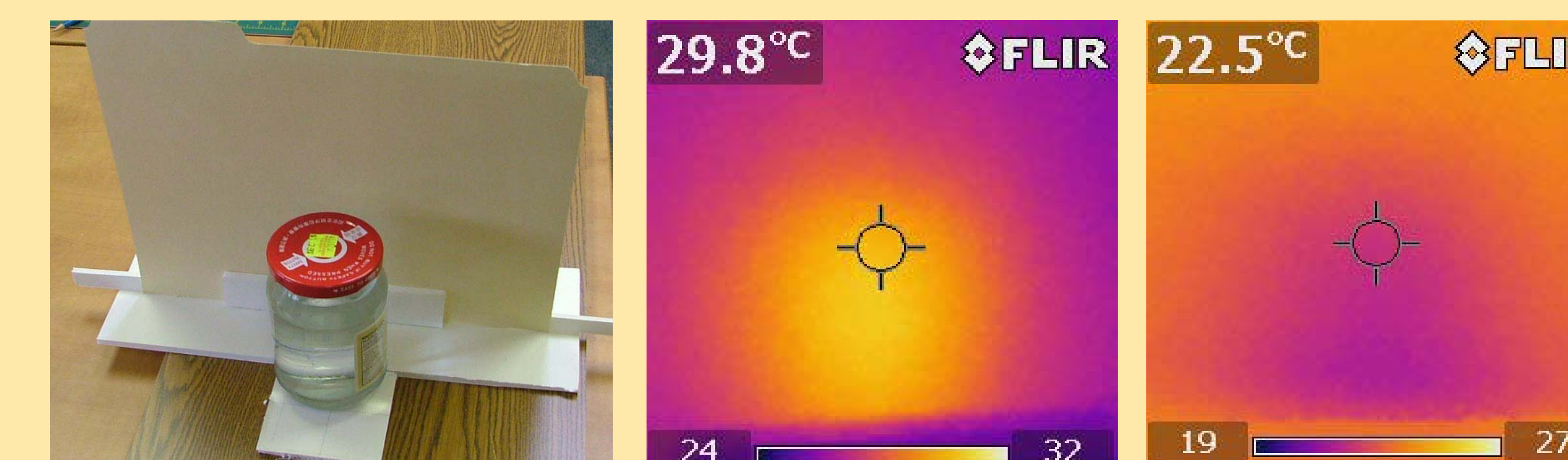
- FLIR 13: 3,600
- FLIR 15: 6,400
- FLIR 17: 14,400

Technology

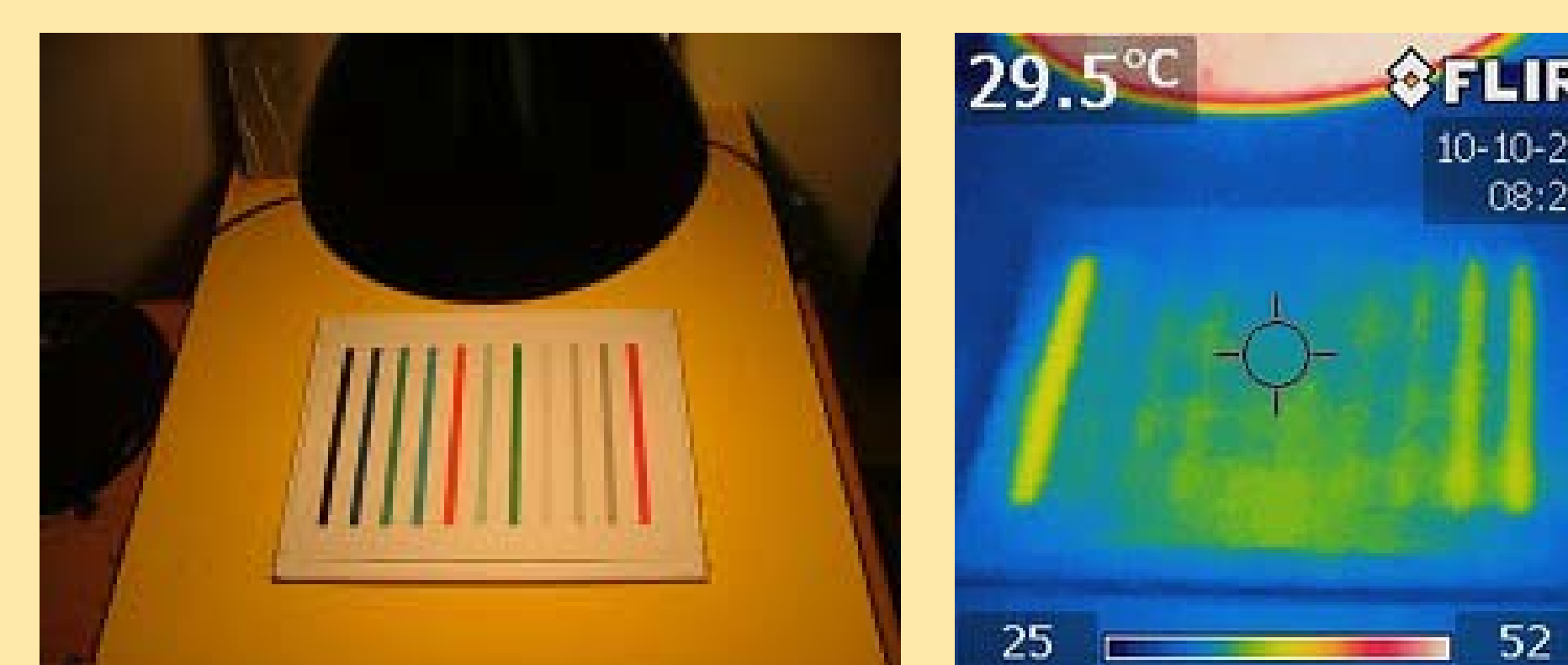
Visualizing oil spill



Visualizing radiation heat transfer



Which color absorbs more
light energy?



IR visualization leads to scientific discoveries!

