# Article information:

Visibly Transparent and Infrared Reflective Coatings for Personal Thermal Management and Thermal Camouflage - Woo - 2022 - Advanced Functional Materials - Wiley Online Library
<https://onlinelibrary.wiley.com/doi/full/10.1002/adfm.202201432>

# Article summary:

1. Climate change and energy crisis are causing grand challenges for maintaining thermal comfort, particularly in regions without access to air conditioners.

2. Controlling thermal radiation is an attractive strategy for saving building energy and providing localized cooling or heating effects on the human body.

3. Metallic coatings are typically used to suppress radiative heat emission due to their high reflectance and low emissivity in the infrared wavelength region, but they also show high reflectance across the entire solar spectrum, which can limit their practical utility.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy as it provides a comprehensive overview of the challenges posed by climate change and energy crisis in terms of personal thermal management and thermal camouflage applications. It also presents a detailed discussion on how controlling thermal radiation can be used as an effective strategy for saving building energy and providing localized cooling or heating effects on the human body. The article further explains how metallic coatings are typically utilized to suppress radiative heat emission owing to their high reflectance and low emissivity in the infrared wavelength region, but they also show high reflectance across the entire solar spectrum, which can limit their practical utility.

The article does not present any potential biases or one-sided reporting, unsupported claims, missing points of consideration, missing evidence for the claims made, unexplored counterarguments, promotional content or partiality. It does not mention any possible risks associated with using metallic coatings for suppressing radiative heat emission either. However, it could have explored other strategies that could be used instead of metallic coatings for suppressing radiative heat emission such as using nanostructured materials or textiles with special optical properties that can selectively control visible optical properties while still providing good infrared reflectivity.

# Topics for further research:

* Nanostructured materials for thermal management
* Textiles with special optical properties
* Strategies for suppressing radiative heat emission
* Visible optical properties control
* Infrared reflectivity optimization
* Building energy saving strategies

# Report location:

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