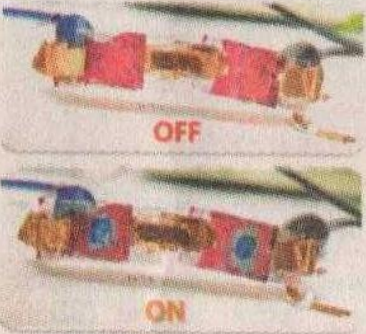


beat the heat

IIT-I's new goggles keep your eyes cool



Our Staff Reporter
INDORE

Amid global warming and rising temperature, IIT-Indore researchers led by Prof Rajesh Kumar of physics department have come up with a flexible goggles designed to block heat and

provide a cooling effect to the eyes.

These innovative goggles can actively filter infrared heat using electrochromic colour modulation, that allows it to adjust its heat-blocking ability in response to a small electric current.

By integrating special materials, the device can quickly shift modes, taking only about a second to change, making it one of the fastest of its kind.

Its unique structure has a mix of materials, including tungsten chalcogenide and oxide, combined with electrochromic active materials.

This combination lets the device block over 15% of heat when the device is ON and maintains a cooler temperature, with a measurable 6°C difference between the two sides of the goggles' surface.

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This not only makes the goggles effective for cooling but also adds to the comfort of the wearer. The lens switches colour between blue and magenta, providing a visible sign of its active heat-filtering state. In addition to blocking heat, the goggles show a significant level of light control, with an optical modulation of up to 60%. The prototype is flexible and can be bent or twisted, making it adaptable for various practical applications where heat isolation is needed. This breakthrough points to a future of eye-care gadgets that not only protect from sunlight but also enhance comfort by reducing heat. "The technology will be of immense use for people working under extreme heat conditions especially our army working in such areas and personnel working in desert.

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