

A group of scientists from Korea and Japan has opened a new crystal that can “breathe” - absorb and secrete oxygen at relatively low temperatures. This ability can find application in pure energy, smart windows, etc.

The crystal consists of strontium oxides, iron and cobalt. When heated in a gas medium, it emits oxygen, and then absorbs it again without destroying it. The process can be repeated many times.

“The crystal seems to breathe oxygen on command,” explains Professor Professor Hyunzhin from the University of Pusan. Oxygen control is important for fuel elements on solid oxides, smart windows that regulate heat, and thermalrotranszistors.

Previously, materials with this ability were too fragile or worked only under extreme conditions. The new crystal is stable and works at “soft” temperatures. Only cobalt ions are involved in the process, while a new stable crystalline structure is formed.

Researchers showed that the crystal returns to the original form after re -saturation with oxygen.