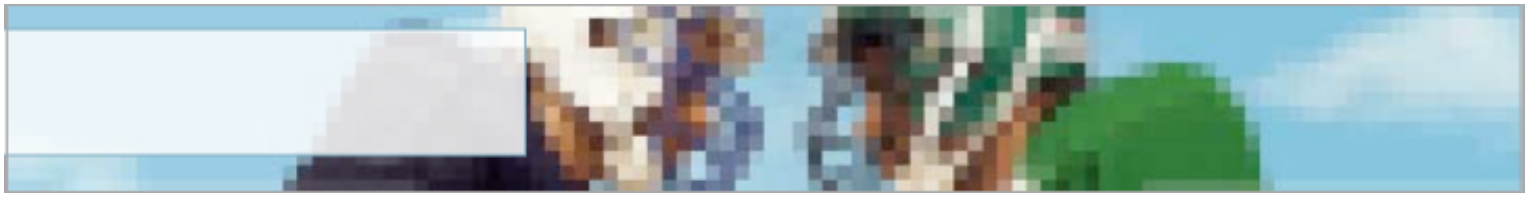

NewsTrack - Science

Scientists order crystal polar molecules

COLUMBIA, Mo., Jan. 18 (UPI) -- U.S. scientists have found a way to order polar molecules in crystals -- a discovery that holds promise for telecommunications and computing.

Not only have the University of Missouri-Columbia researchers found a way to organize crystal molecules so the poles align in the same direction, but they also discovered aligned crystals hold potential to change the frequency of light.

"Making crystals parallel is difficult to do, but we've found a way to do it and are getting better at it," said chemistry Professor Rainer Glaser. "As a chemist, I was expecting the potential of a parallel crystal to be the sum of all its molecules, but in our collaborative work we've found there is even greater potential for these crystals than I anticipated."

Glaser collaborated with doctoral student Yongqiang Sui and Assistant Professor Ping Yu in the research. Yu found that when an infrared laser is focused at a parallel crystal, the frequency of light changes. That finding, still in the preliminary stages, might lead to technology that would create faster and more efficient microchips.

A study detailing the discovery appears in the January issue of the journal Accounts of Chemical Research.