

DECCAN Chronicle

Published on *Deccan Chronicle* (<http://www.deccanchronicle.com>)

[Home](#) > Molecule design to check fake note printing

Molecule design to check fake note printing

DC/Ajayan | 24th Nov 2012

Kochi: One may wonder what advanced supra-molecular chemistry has got to do with currency notes. Fact is, it can help check the problem of counterfeit currency, and also diagnose diseases and locate explosives.

Studies on molecular architecture by A. Ajayaghosh, attached to the National Institute for Interdisciplinary Science and Technology, led to this discovery. Recognition came his way when he was selected for this year's Infosys Award for Physical Sciences.

"The possibilities are so infinite that this most modern branch of chemistry can be used to create sensors that can diagnose diseases and even detect explosives," it is stated.

A chemist who has studied different branches of the science, Ajayaghosh has been working for the last 10 years to find out how molecules communicate with each other.

It is through this communication that the architectures of molecules are formed, giving them different shapes, colours and properties.

He has been studying these designs – which are a result of weak forces in molecules communicating to take forms – and its applications are umpteen.

These molecular architectural structures are recreated and used to make electronic devices like semiconductors.

Ajayaghosh has found that some of these structures do emit light. This fluorescent property can be used to make sensors. This fluorescent quality can be used in printing currency, which can be a security check against fake notes, he says.

"Based on the structures of these chemicals, sensors can be made, which can help in early detection of a disease," says he.

Ajayaghosh, who had been handpicked by leading scientist A.D. Damodaran to be a part of the Regional Research Laboratory, rechristened NIIST.

Tags: [fake currency](#) [1]

[Chemistry](#) [2]

[best picks](#) [3]

Source URL: <http://www.deccanchronicle.com/121124/news-crime/article/molecule-design-check-fake-note-printing>

Links:

[1] <http://www.deccanchronicle.com/content/tags/fake-currency>

[2] <http://www.deccanchronicle.com/content/tags/chemistry>

[3] <http://www.deccanchronicle.com/content/tags/best-picks>