

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ  
КАФЕДРА ІНОЗЕМНИХ МОВ  
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР

МАТЕРІАЛИ ІХ МІЖВУЗІВСЬКОЇ  
НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ  
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО ЦЕНТРУ  
КАФЕДРИ ІНОЗЕМНИХ МОВ

**“TO MAKE THE WORLD SMARTER AND SAFER”**

(Суми, 26 березня 2015 року)  
The nineth scientific practical student`s, postgraduate`s and teacher`s  
LSNC conference

# SAFETY AND TOXICITY OF CARBON NANOTUBES IN OUR FUTURE LIFE

I. Shakhova– Sumy State University, group EL – 41  
I.A. Morozova – Adviser

Carbon nanotubes take the form of cylindrical carbon molecules and have novel properties that make them potentially useful in a wide variety of applications in nanotechnology, electronics, optics and other fields of materials science.

The most important and useful properties of nanotubes are different for different areas, like strength, hardness, it's kinetic, optical, electrical and thermal properties

## Safety and toxicity

The toxicity of carbon nanotubes has been an important question in nanotechnology. Preliminary results highlight the difficulties in evaluating the toxicity of this heterogeneous material. Under certain conditions CNTs can enter human cells and accumulate in the cytoplasm, causing cell death.

But there are also advantages of using CNT and some possible just in future practical application, like biomedicine, solar cells, hydrogen storage, textile(uniforms for the military etc), acoustics, elevator into space and so one.

## Conclusion

The discovery of carbon nanotubes are the most important in modern science. This form of carbon in its structure is intermediate between graphite and fullerenes. However, many properties of carbon nanotubes have nothing to do with graphite or with fullerenes. This allows us to consider and explore nanotubes as an independent material with unique physical and chemical characteristics.