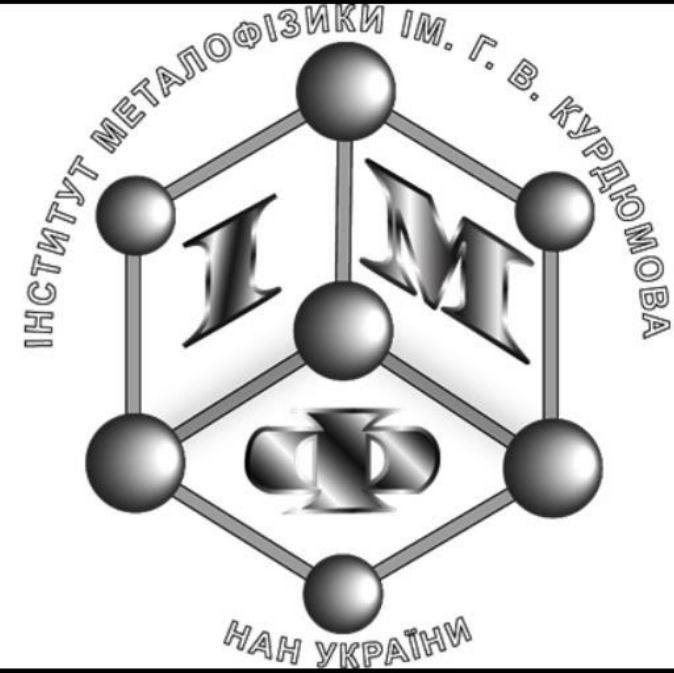


THE POSSIBILITY OF USING CARBON NANOMATERIALS IN ALTERNATIVE ENERGY



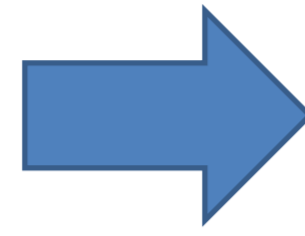
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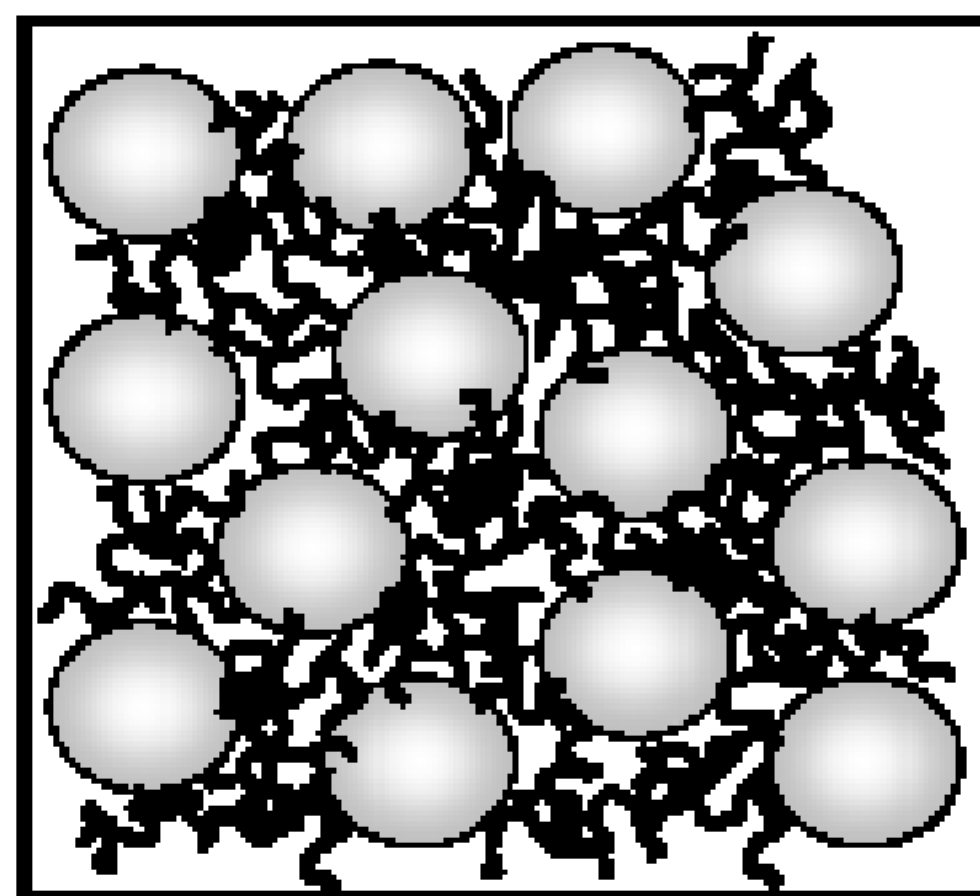
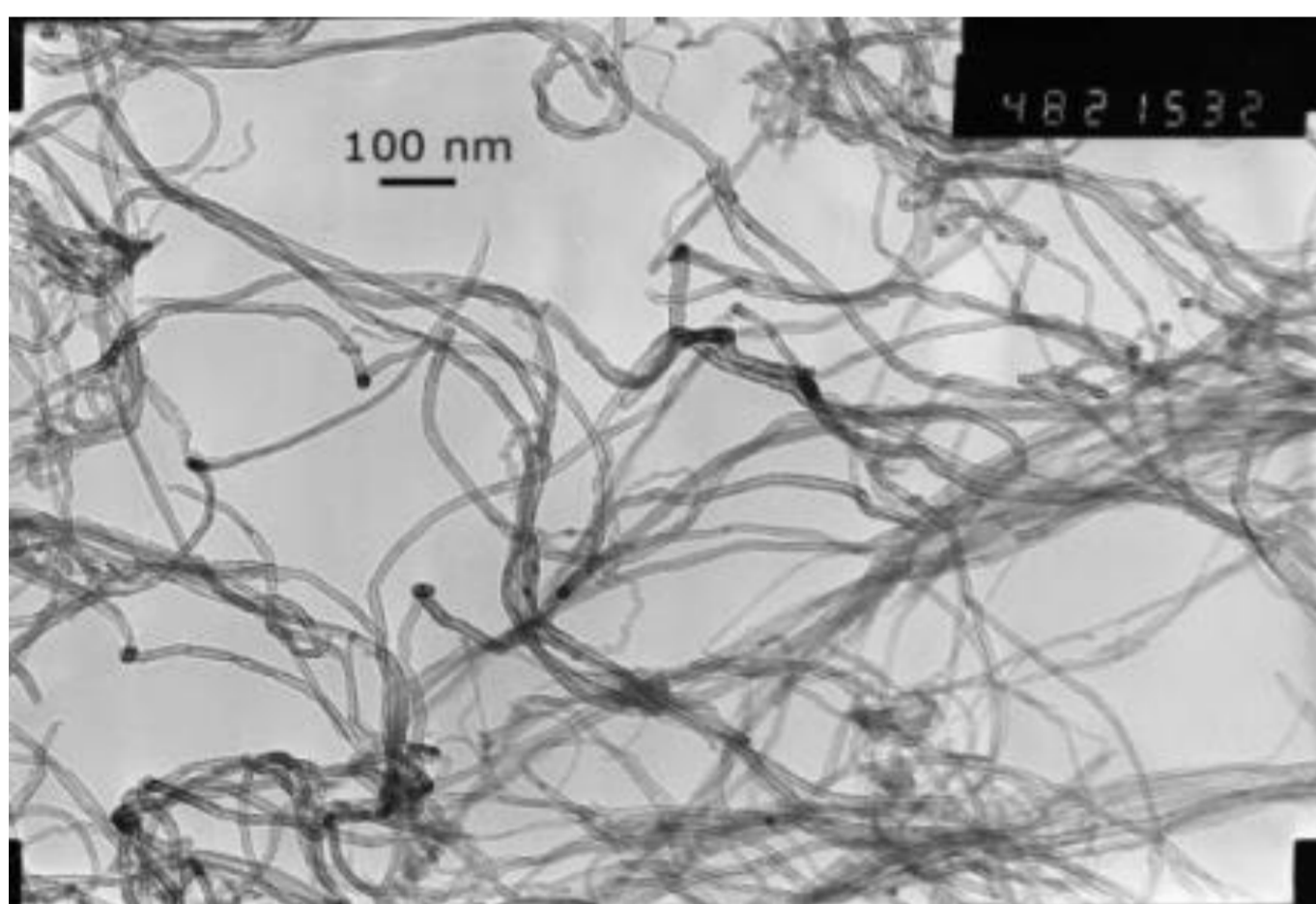
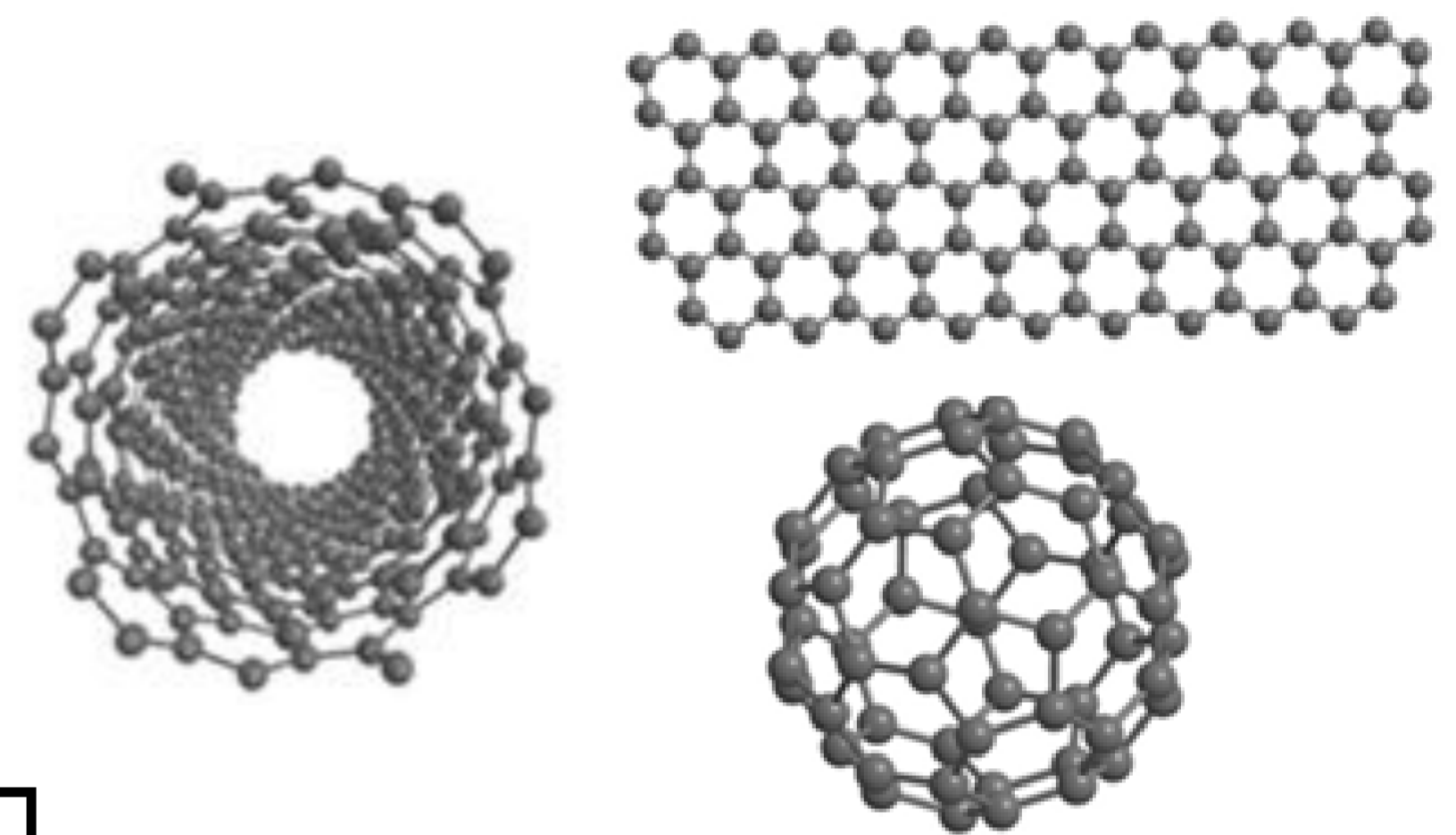
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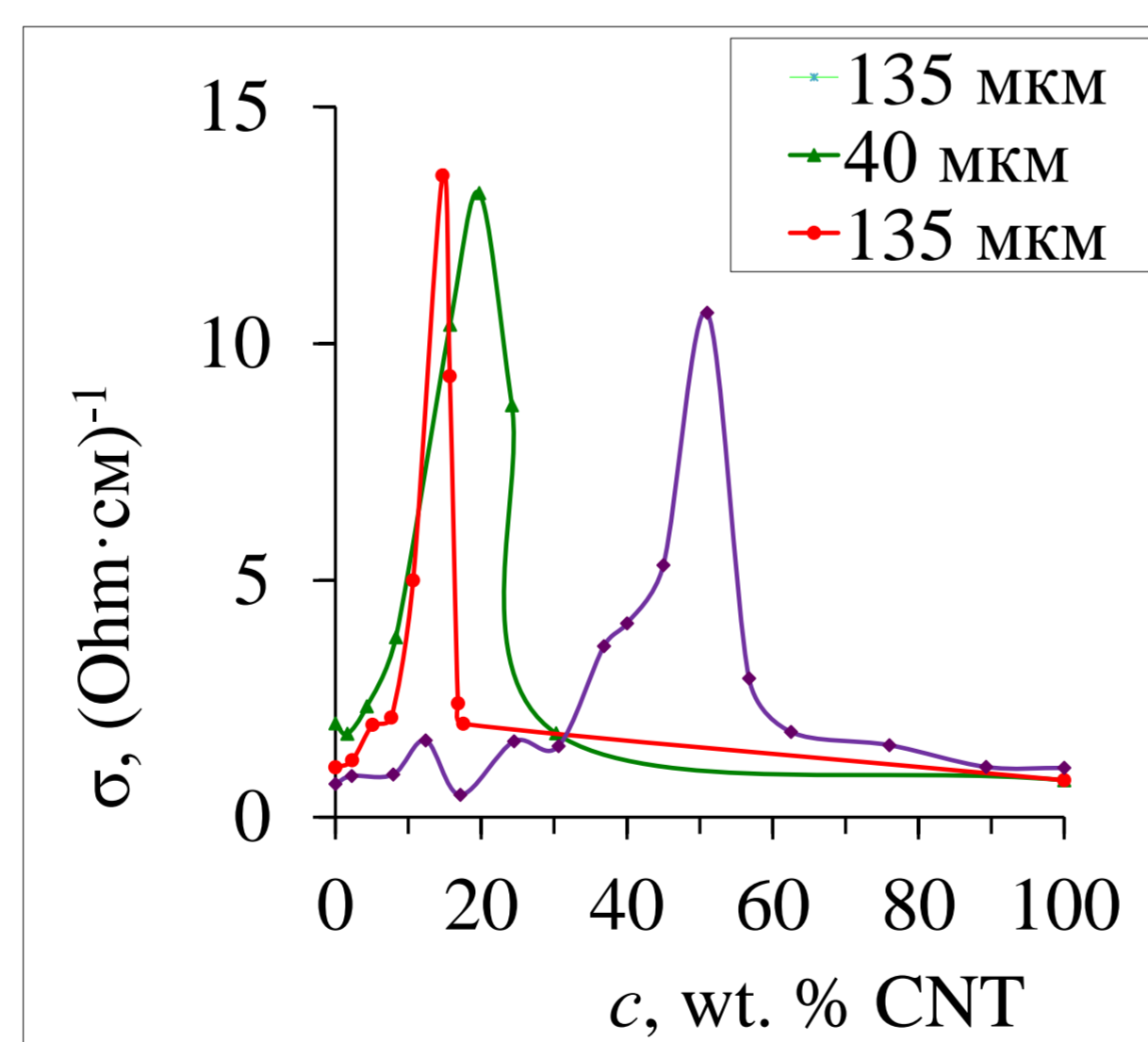
new materials are needed for development

The development of industry and technology need a new class of materials on the scale required for industrial use, with minimal costs. Currently, the interest in nanostructured materials and substances in nanodispersed condition is growing.

Many areas of nanotechnology are related to carbon nanomaterials and are aimed at creating new materials for various industrial needs, including materials for energy storage and converters.



Dependences of maximum (σ) values of electrical conductivity of LaNi_5 – CNT systems on concentration (c) of CNT for different particle sizes



CNT significantly increases the maximum value of electrical conductivity after adding to the metal particles due to the filling of cavities between metal particles with nanocarbon material, the conductivity of which increases when the composite is compressed due to the appearance in its volume of conductive bridges of carbon nanolayers. Metal particles, which leads to an increase in the number of free electrons in the carbon component.

Thus, composite materials such as metal-CNT acquire new qualities that were not present in any of their original pure components, which allows the use of such composites in the creation of materials for "cold" cathodes of photothermal converters, which are important as high conductivity, and surface geometry