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Reinforcing Concrete with aligned CNTs in magnetic field by ferrofluid

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Concrete is a useful product in construction and the advantage of it, is being accessible and low price and also important to reinforce. Ferrofluid Nano particles were synthesized by co-precipitation, and the CNT(Carbon Nanotube) was connected to Ferro fluid in optimal PH and proper Temperature by surfactant. After the confection of the resultant material with concrete (56ppm) it was situated in magnetic field(2000gauss). Synthesised nano particles were analysed by SEM(scanning electron microscope) and the result showed aligned CNTs and the 56.48 size of ferrofluid. The armed concrete have been analysed with compressive strength test by the circumstances of ASTM(No.C39-86). The results of the armed concrete, show 30% increase in compressive strength.

Biography:

Hamidreza fadakar was born on 6th of January in 2000. He's started his investigation about nanotechnologies since 2014 in Mofid high school No.2. He studied on **hydrophobic materials** for a year. Afterwards he started working on **silver nano composite** and finished his project on October of 2015. He appeared in nano international exhibition of Iran on October of 2015 with his **silver nano composite** project. He awarded the 2nd place of nano-biology section in that fair. He immediately started another project about **reinforcing Concrete with aligned CNTs in magnetic field**.