Abstract

Recent advancement in physics and nanotechnology have paved the way for manufacturing of processor, memory, batteries, transceiver, antenna and sensing units at nano-scale. A nano-machine is an integrated device with dimensions in nano-scale, and able to do simple tasks. By networking of nano-machines, they are able to perform the more complicated tasks by the cooperative manner and can play an important role in applications such as biomedical, environmental monitoring, industrial and military. Many novel nano-scale communication options have been currently proposed. However, there are four main nano-scale communication techniques: nanomechanical, acoustic, chemical or molecular and electromagnetic communications. However, this paper focuses on the molecular and electromagnetic communications as the promising nano-scale communication approaches, and then will be reviewed the novel nano-scale communication paradigms that are currently presented.

References

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A Brief Survey on Molecular and Electromagnetic Communications in Nano-Networks


Index Terms

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Electromagnetic communication