the specified traffic pattern, 20000 packets were injected in the network where k. Each packet has 5 flits. Owing to E_link and E_router values are similar for all technology nodes presented, the energy consumption of different mesh NoC sizes operating in 1 GHz is shown in figure 6 considering MOS routers NoCs and nanoelectronic routers NoCs. As can be seen, the router consumes the most part of the energy in a communication architecture, since the in both cases copper interconnects were used. In this way, using nanoelectronic devices is a promising alternative for reducing the total energy consumption.

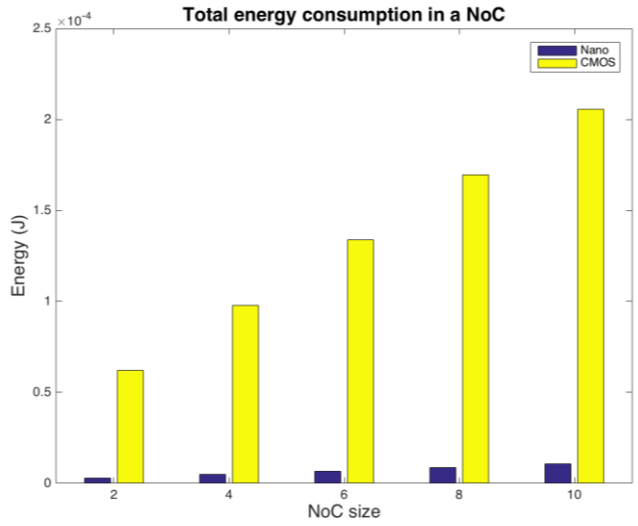

Figure 6. Performance comparison between MOS and nanoelectronic NoCs

5 Conclusions

In this work, the performance evaluation of a NoC interconnected architecture using nanoelectronic devices was proposed and its energy was estimated. This works shows the potencial of using nanoelectronic devices for NoC architectures. With the reduce of the devices, the energy dissipated in a system is becoming a huge problem. Thereby, the gain introduced by nanodevices is very promising and can provide a substantial reduction in the total energy of the system.

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