The semiconductor industry faces the challenges and opportunities of increased demand of silicon. The growth of artificial intelligence (AI) and the Internet of Things (IoT) and the ongoing demands from the smartphone sector and other high-tech industries placed stress on the silicon supply chain.

It is time solve this problem by looking alternative way of making chips from other nanomaterials for semiconductor industries to meet demand.

**The solution**

Using **graphine** for chips will be revolution in semiconductor production. Graphene might lead to breakthrough because of its exceptional properties, such as its high mobility that has been shown to be up to 250 times higher than that of silicon, low loss requirements, small scale and flexibility. Graphene switches could not be turned off without proper band-gap engineering.

**Why graphene will bring the needed revolution**

Graphene is the thinnest material known, and at the same time one of the strongest. It consists of a single layer of carbon atoms and is both pliable and transparent. The material conducts electricity and heat very effectively. And perhaps most importantly, it is very cheap to produce.

Given that it’s possible to make semiconductors out of graphene instead of silicon, we can make semiconductor components that are both cheaper and more effective than the ones currently on the market.