

Vibrant Quantum

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Abstract:

The economic and social value generation of Merck is based on the development of medicines for serious illnesses and new materials which rely on costly, time consuming and often elusive empirical processes. Merck is permanently re-inventing itself, this cycle of permanent reinvention -which guaranteed the success of Merck for the last 350 years- is driven by curiosity.

As quantum effects have inspired curiosity and captivated people since the beginning of it's observation, we will present the impact that "quantum thinking" has on the way we interact with nature and each other and we look at this from the "industry perspective".

As recent example of applying this "quantum thinking" on ourselves we showcase the foundation of the "QCTF" – the Quantum (Computing) Task Force which shows the power of looking at things from multiple perspectives, assessing and harnessing the potential of quantum technology.

We identified that Quantum computing could offer a way out of this dilemma. Especially since the technical realization of controllable quantum systems catapulted quantum physics and quantum information sciences out of the lecture hall into the attention of the economy. Merck builds up internal expertise and has launched concrete projects which will be presented in the following talk.