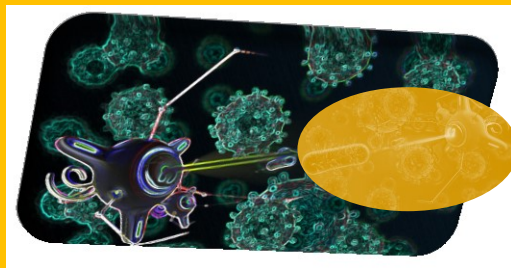


# How Infinitism can boost Nanotechnology

***By: Korosh Erfani, PhD***



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## Introduction

The microcosm always fascinated human beings, mixing realistic inspiration and fiction to draw a scheme of exploration for that universe. For instance, in December 1959, *Richard Feynman* presented his famous lecture at the annual American Physical Society meeting at Caltech, entitled later: “*There's Plenty of Room at the Bottom: An Invitation to Enter a New Field of Physics*”. His original ideas, so odd at that time, were going to become the basic thoughts behind a new branch of technology called Nanotechnology. Since then, this latter made huge progress.

Many other concepts came up as well, formulated in different papers and books, and speeches where the brilliant minds suggest that if we know manipulating the inner structure of matter at its sublevels, we can make various materials as we want.

We saw the book entitled *Engines of Creation: The Coming Era of Nanotechnology* published in 1986, where the author, *K.Eric Drexler*, suggested new applications of this new technology to make marvelous things.

Nanotechnology is today a known field of activity with the possibilities that herald a great potential future with the capacities that can draw a new pathway for the human civilization. In the United States, the [National Nanotechnology Initiative](#) (NNI) defines its mission as “work[ing] together toward the shared vision of a future in which the ability to understand and control matter at the nanoscale leads to ongoing revolutions in technology and industry that benefit society.”<sup>1</sup>

What would be these ongoing revolutions in technology and industry? Is there any limit to what we can do for understanding and control matter at the nanoscale? Can the same reasoning be extended to other spheres, those smaller than nanoscale and those that are in the completely opposite real, in macrostructure?

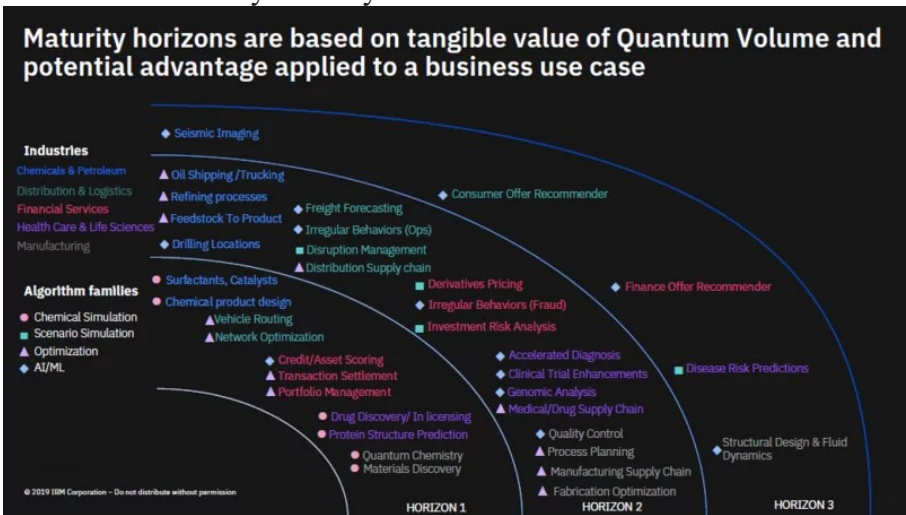
First, let’s see the current situation for this field of nanoscale. If we take just one of its fields of this activity, which is *quantum computation*, we can see that there is already an outlying perspective of applications and evolution that had been initiated and in advance. For instance, IBM

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<sup>1</sup> <https://www.nano.gov/about-nni>

predicts quantum computing use cases to evolve over 3 horizons:

- “Horizon 1: Applications in the next few years
- Horizon 2: After stable but not optimally working quantum computers
- Horizon 3: Beyond 15 years”<sup>2</sup>



Source: IBM

As we see, the applications are multiples, and the possibilities of using *quantum computation* look having sky as their limit. Here are some of these concrete fields of application:

“Automotive:

1- Optimizing large autonomous fleets

Energy:

2- Utilization prediction

<sup>2</sup> <https://research.aimultiple.com/quantum-computing-applications/>

3- Grid optimization

4- Weather forecasting

Finance:

5- Automated trading (e.g. predicting financial markets)

6- Risk analysis

7- Portfolio optimization

8- Fraud detection

Insurance:

9- Valuation of instruments, premiums in complex cases

10- Route and traffic optimization

11- Supply chain and inventory optimization

Manufacturing

12- Design optimization (e.g. batteries, chips, vehicles etc.)

Pharma:

13- Drug interaction prediction

14- Personalized medicine taking into account genomics

15- Machine learning

Research Use Cases

15- Material science

17- Accelerating drug approval process

18- Cryptography

19- Espionage

## 20- Chemical material production”<sup>3</sup>

The same promising outlooks, more or less, are being designed in other fields of *Nanotechnology*. This is very hopeful since at a given moment we could have that qualitative and turning point change we need to stop damaging the environment to get our basic needs like water, fossil fuels and likewise.

For instance, a recent record of performance in the quantum computing field shows that “Australian scientists have created the world's first-ever quantum computer circuit – one that contains all the essential components found on a classical computer chip but at the quantum scale.”<sup>4</sup> This is a demonstration of what we can now accomplish by placing “quantum dots with sub-nanometer precision”

By seeing the challenge that they had to solve we can see how the task was as well hard to accomplish as promising for its applications: “The trickiest parts were figuring out: exactly how many atoms of phosphorus should be in each quantum dot; exactly how far apart each dot should be; and then

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<sup>3</sup> Ibid

<sup>4</sup> <https://www.sciencealert.com/a-huge-step-forward-in-quantum-computing-was-just-announced-the-first-ever-quantum-circuit>

engineering a machine that could place the tiny dots in exactly the right arrangement inside the silicon chip”.

So we see that science and technology, hand in hand, are progressing to make possible what was in the arena of imagination just a few decades ago. Now what is a pressing query is if we can accelerate these advances so that we could win the time race compared to the speed of the existential risks that are hovering over humanity and its home, planet earth.

Our persistence is on account of the fact that the global situation is getting worsened, and we don't know if there would be any major improvement or not if we don't organize our activity in some specific and promising fields like Nanotechnology. Because if we miss doing it on time, we will be in an irreversible course of climatic changes and its bad sub-consequent side effects: drought, water crisis, climatic forced immigration, socioeconomic upheaval, and so on.

It looks that the main chance we have is through the domains like Nanotechnology where we could change the atomic structure of molecules purposefully. If we can do it, to deal

with pollution due to fossil fuel consumption, we would be able to save our planet, otherwise, not really.<sup>5</sup>

But in order to do it we need going above science and technology. We need something more than the pure technicality that can house it in a constructive context of cooperation and concentration of global efforts for. That's why, by referring to the *Infinitism* theory and its principles, to organize all these collaborative and targeted activities, we need something more than the science, technology, and industry's capacities. This necessary and complementary component is philosophy.

But, one can ask what the role of philosophy is amid this intricate technicality represented by Nano-activity.

Here is the answer:

The philosophical theory of *Infinitism* states that *everything is infinity or is not*. This means that the microcosm and macrocosm are both infinite. Whatever is the direction in which we explore the matter, we see *infinitude in action*: towards the subatomic particles and their innermost

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<sup>5</sup>With the Ukraine war the world nosedives in the most polluting methods of energy providing and this means worsening a bad situation.



configuration or on the way to galaxies, clusters, and the entities they are a tiny part, our studying deed shows that the matter is infinitely composite, or, compositely infinite.

This view suggests that the scope of nanotechnology is just a small part of the infinite edifice of matter, and we should go to the preparation of the sub-nanotechnology for the next level. The exciting point is to take into account the fact that, according to Infinitism, there is no limit; the more we dig in, the more there will be to discover and to manipulate; and this course never ends, if we can keep our civilization from any form of self-annihilation.

This infinite reality gets a more explicit aspect when we link it to another topic of *Infinitism* which is the *descaling approach of existence*. According to this concept, in infinite perspective of structuration, the universe doesn't have any absolute scaling. What we call "dimensions" are highly relative and a man-made concept to deal with matter in practice with a measuring system that is consistent with our material size. Whatever is the scale on which we want to maneuver, we can be sure that the same scaling could be found in the alter-sphere. For instance, we think that there is smaller and smaller size of reality in microcosm; the same

scaling claim is true as well for the macrocosm, where there would be always bigger and bigger sizes as well. Now, when we put these two gradual sizing side-by-side, we can see that both scaling are the same, they are both infinite.

By developing the concepts like these above ones and many more in other papers, we can see what a few implications of this infinitist standpoint on the Nanoscaling are:

1. There is no end, nor limit, on the levels of the inner structure of matter we can dig in. So, the technology needs to become smaller and smaller for exploring all these uncountable echelons where there is no end.
2. The same endlessness is true if we conceive and develop a Mega-technology by which we can explore the infinitely greater structures of the universe. There as well we can find infinite entities, one bigger than the other that include each other infinitely.
3. The conversion of each level of technology into something even tinier or bigger would be an accumulative process for the evolution of our ability to get access to a smaller or a bigger level endlessly. The accumulation of knowledge and abilities will

trigger qualitative alteration that bring us up to the new existential levels.

4. The manipulation of the constituting causal chains of an entity triggers a change that goes endlessly in both micro and macro levels of that entity's interrelations. This means that our interference changes the bigger entity of which the manipulated component is a part of, and also, all the components and subcomponents of the entity itself change at the same time.

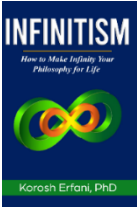
In conclusion, we can see that we could improve considerably the curve of progress in nanotechnology if we equip it with a philosophical worldview in which there is no end nor limit to whatever we see a material entity. Once we have this eye-opener standpoint we can accelerate our advancements in Nanotechnologies to such a level that can engender the turning point we do need so much right now, and before it's late.

The theory of *Infinitism* pretends playing this role by designing a pathway in scientific discoveries and technological prowess that never stops since there is no end. What this theory suggests to Nanotechnology, as its future steps of progress, is a kind of Infinite-scaling that generates

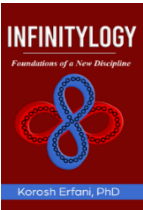
Infinite-technology where the Nanoscale will be just one little scope of an infinite trail.#

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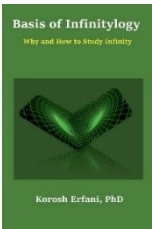
## Books published so far:



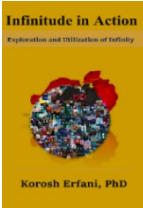
***Infitinism: How to make Infinity your philosophy for life***, ILCP Publishing House, 2021, 375 pages.



**Infinitylogy: Foundations of a New Discipline**, ILCP Publishing House, 2021, 148 pages.



**Basis of Infinitylogy: How and why to study Infinity**, ILCP Publishing House, 2021, 148 pages.

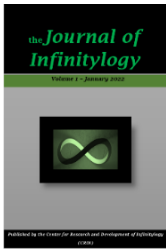


**Infinitude in Action: Exploration and Utilization of Infinity**, ILCP Publishing House, 2021, 200 pages.



**Project of Infitinism: How to Transform your Ideas into Projects**, ILCP Publishing House, 2021, 132 pages.

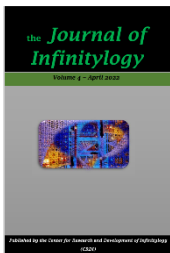
# *the Journal of Infinitylogy*



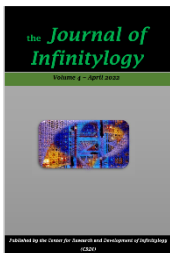
**The Journal of Infinitylogy, Volume 1, January 2022, CRDI Publication**



**The Journal of Infinitylogy, Volume 2, February 2022, CRDI Publication**

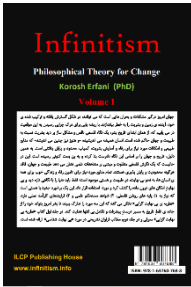


**The Journal of Infinitylogy, Volume 3, March 2022, CRDI Publication**



**The Journal of Infinitylogy, Volume 4, April 2022, CRDI Publication**

## Our books in other languages



- *Infinitism: The Philosophical theory to change*, (Book in Persian), ILCP Publishing House, 2020, 1018 pages. (possible translation in the future)



The CRDI plans translating these mentioned English books in French in the future.

## Our websites



- Website on the *Center for Research and Development of Infinitylogy (CRDI)*

[www.thecrdi.com](http://www.thecrdi.com)

- Website on the philosophical theory of *Infinitism* and its applications.

[www.infinitism.info](http://www.infinitism.info)

- Website on *Infinitylogy* as a new discipline and its establishment:

[www.infinitylogy.com](http://www.infinitylogy.com)

- Website of the ILCP Publishing House

[www.ilcpbook.com](http://www.ilcpbook.com)

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