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Advancing Frontier Nanophysics in Time of Analytical Chemistry: Who to educate first?

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Abstract

Frontier nanophysics in conjunction with nanomedicines, nanoscience and nanotechnology (NNN) developed before the science of analytical chemistry has been very challenges with many competitive obstacles to improve the accuracy and precise nm measurements in order to find out the point of its main chemical structure compositions, uniformity and the concentration contents to each substance. Moreover, exotics nanomaterials either in pure organic and inorganic compound or in hybrid organic-inorganics nanomaterials have shown their remarkable as well as attractive impacts in many nanotechnology and related industrial applications such as in ultrafast picosecond or femtosecond telecommunication integrated circuits and devices system, cosmetics and beauty products, as well as health or pharmaceutical drugs and herbal medicines. In this short communication paper, one explains how to educate first those who are eager indeed to study and expand their knowledge in the discovery level of understanding the nature of chemistry materials. Such guide will involve at least two to three parts of knowledge and skills consisted of **the origin of life, electronics of molecular system (MES), and precise or accurate measurements**. By implementing these advices, one believes the progress of applied physics frontier works in analytical chemistry will soon obtain a good harvest in the near future.

Keywords: Frontier nanophysics, analytical chemistry, chemical structure, quantitative parameter.

The invented contribution: A simple concept in advancing frontier nanophysics in time of analytical chemistry was provided with general communication for wide readers in interdisciplinary fields.

GENERAL COMMUNICATION

In our expanded universe with over 7 trillion galaxies in it for up to present time in the last ~13.7 billion years, the origin of life is still having unsolved mystery particularly on the unseen thing as a part of mind, spirit and soul related to matters and antimatters as well as dark matters. However, the remarkable side of current very productive ongoing multitasking researches [1-33] as illustrated in

Fig. 1 that involves many different basic sciences field with the focus on multidisciplinary nanophysics studies expanded using multitasking investigations is that the core of materials which were the starting point to generate the living cell from the nuclear sizes such as boson Higgs, gluon, quarks, electron, and many other elementary particles to the basic atomic structures of C, O, H, and N up to **DNA** with the size of nanometer ($\sim 10^{-9}$ m) has been obviously understandable with many real implementations in the development

of the origin of organ as well as vaccines and antibodies products. Furthermore, various inventions in nanomedicines, nanoscience and nanotechnology (NNN) in the last few decades have improved the understanding in the chemistry evolution critical knowledge based on conservation of mass in conjunction with conservation of energy. In addition, the ancestor of living creatures on earth has presently clearly explained with the flowchart knowledge as embedded in **Fig. 1**. Therefore, it will be a challenge to analytical chemists to expand such distinguished nanophysical thought in real healthy and fruitful life of human being in this sophisticated 21st century.

Frontier nanophysics research in analytical chemistry requires a very precise and sensitive measurement supported by an accurate theoretical physics background in nanostructure scale down to atomic interactions. Recently the use and implementation of the **Gas Chromatography** with a Flame Ionization Detector (**GC-FID**) and Gas Chromatography-Mass Spectrometry (**GC-MS**) apparatus duo system have been very attractive due to the high accuracy measurement of concentration quantity in each compound found in just a few liquid sample content such as essential oils, ionic liquids, and many others exotics solutions and healthy drinks. Furthermore, by incorporating the integrated measurement with the use of **GC-FID** and **GC-MS** equipment to detect the details compounds compositions in the same investigated liquids, one could analyze precisely the main compound contributions as well as its minor compounds influence to control the exact concentration quantity of it. Such creative high quality research could be supported by the origin of life knowledge [1-3,

5,6, 26] and the calculation by incorporating the electronics of molecular system (**MES**) [16,30]. One important question here is who to educate first?. According to our development of knowledge and understanding via spiritual belief [1], advanced philosophy [2], and theoretical physics as well as experimental implementations with social sciences in life and nanomedicines [3, 5-33], the main point is on the target with a precise control [34] for those who are interested strongly to study and expand their scientific and engineering knowledge interactions in the discovery level of understanding the nature of chemistry materials. In facts, most of our research students [27-29] in the nanotechnology research center and innovative creation that we developed were significantly conducting such principles with the hope of their brighter career in the multitasking science, technology and social life.

In brief summary, the frontier nanophysics development for analytical chemistry can be improved by applying at least two to three parts of knowledge and skills in involving the investigation of origin of multi-healing system in natural products, cooperating the calculation of electronics of molecular system (**MES**), and measuring the precise structures of possible compound content and their each quantity concentration. We would like to suggest that the analytical chemistry for synthetic chemistry nanomaterials is hard, and it actually requires various special developed techniques to expand the advanced knowledge and understanding for gaining those aims.

Figure 1. A scientific illustration on how to expand the frontier nanophysical works in analytical chemistry with the cooperation of two to three main parts of research investigations by focusing on those who are really eager to improve their better life with greater impacts to worldwide society.

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Dr. H.I. Elim is a patience scientist from Indonesia. He has developed multitasking physics research involving many different fields such as pharmacy, medical science, geoenengineering and nanotechnology in the last 20 years. Based on his best achievement in such integrated field of applied physics, Prof. Elim is currently a leading scientist in Indonesia 50 best scientists overall from ~ 400,000 Indonesia scholars.

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