Perspective

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Prof. Mostafa A El-Sayed and *Nanobiomedicine*

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Abstract

Prof. Mostafa A El-Sayed, Regents' Professor and Julius Brown Chair at the Department of Chemistry and Biochemistry in the Georgia Institute of Technology, has well over 755 publications in a variety of fields ranging from the areas of photochemistry, to ultrafast laser spectroscopy, to time-resolved Raman spectroscopy, to formulating what is known as the El-Sayed Rule. One of the main subject areas of Prof. El-Sayed's research interests is *Nanobiomedicine*; he is one of the pioneers in this field. We are sending this perspective in celebration of Prof. El-Sayed's 85th birthday on May 8, 2018. We would like to encourage the science community to submit their research to *Nanobiomedicine*. In brief, Prof. Mostafa El-Sayed has demonstrated that using gold nanoparticles and irradiating them with laser beams can kill cancerous cells without harming the surrounding healthy tissues. The concept of photothermal therapy, that he introduced, had been successful in culture cells and living animal models.

Keywords

Nanoparticles, photochemistry, laser, plasmonic, *Nanobiomedicine*

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Prof. El-Sayed's work has the highest impact on the scientific communities all over the world.[1,2] So it is no wonder that Prof. El-Sayed was honored, over the decades, by two American presidents. In 2007, he was honored at the White House by former President George W Bush with the highest scientific award possible in the United States, the US National Medal of Science in Chemistry. Also, in 2014, he was appointed by former President Barack H Obama as a member of the president's National Medal of Science Committee. I will refer the reader to the complete biography and the complete profile of Prof. El-Sayed at the website of the Georgia Institute of Technology.[2]

The editorial services and activities of Prof. El-Sayed are impeccable. He is/was on the advisory board of more than a dozen national and international renowned journals. To name a few of these journals at which he had served on their advisory board, *Accounts of Chemical Research*, *Nano Letters*, and *Photochemistry Reviews*. He was also the editor in chief of the *American Chemical Society* publication and *Journal of Physical Chemistry* for 25 years, during which time he totally transformed the journal, added multiple sections to it, and ultimately dramatically increased its impact factor.

The author had the honor of meeting with Prof. El-Sayed many times during the American Chemical Society's national meetings over the last 5 years. The most important meeting, however, was during the biannual Gordon Research Conference on Metals in Medicine in 2014 at Andover, New Hampshire. During that conference, the author learned a great deal from Prof. El-Sayed's seminal presentation on nanomedicine. Without asking him, he started giving valuable advices to the author as if he is his own postdoc associate or junior faculty associate. I later learned that I was not alone in that regard in which the

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author learned that Prof. El-Sayed gave many valuable advices to Nobel Laureates such as the late Prof. Ahmed Zewail.

It is well established that there has been a proliferation of the number of journals that carry the theme nanotechnology and nanosciences. The following few are simple examples: (1) *ACS Nano*, (2) *Nanobiomedicine*, (3) *Journal of Nanomedicine Research*, (4) *Nanomaterials and Nanotechnology,* (5) *International Journal of Nanomedicine*, (6) *Nano Today,* and (7) *Nano Letters*; all of these journals will never be possible without the detailed, keen, and prolific work of Prof. El-Sayed and his coworkers, students, postdoc associates and collaborators.[3–13] We wish Prof. El-Sayed happy 85th year of continuing contribution to the scientific community that will ultimately and hopefully lead to great discoveries in treating hard-curing diseases. The detailed career path of Prof. El-Sayed can be briefly found in a recent editorial that appeared this past spring.[14]

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