Editorial

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Treatment of Breast Cancer Brain Metastases through a Targeted Nanomolecule Drug Delivery System Based on Dopamine Functionalized Multi-Wall Carbon Nanotubes (MWCNTs) Coated with Nano Graphene Oxide (GO) and Protonated Polyaniline (PANI) *in situ* During the Polymerization of Aniline Autogenic Nanoparticles for the Delivery of Anti-Cancer Nano Drugs under Synchrotron Radiation

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Editorial

In the last few years, treatment of breast cancer brain metastases through a targeted Nanomolecule drug delivery system based on dopamine functionalized Multi-Wall Carbon Nanotubes (MWCNTs) coated with Nano Graphene Oxide (GO) and protonated Polyaniline (PANI) *in situ* during the polymerization of aniline autogenic nanoparticles for the delivery of anti-cancer Nano drugs under synchrotron radiation was of special interest in various industrial and scientific fields, and also in many area of pharmaceutical and medicinal chemistry involving different catalytic processes [1-73]. The enzymatic determination of dopamine is particularly needed in pharmaceutical and medicinal antiseptic or disinfectant samples, cosmetic bleach hair agent, and also in the plastic industry to make polymers. In very concentrated solution (98%), it has also been used as an oxidizer for rocket propulsion. In this editorial, the chemometric full factorial design analysis was used to treatment of breast cancer brain metastases through a targeted Nanomolecule drug delivery system based on dopamine functionalized Multi–Wall Carbon Nanotubes (MWCNTs) coated with Nano Graphene Oxide (GO) and protonated Polyaniline (PANI) *in situ* during the polymerization of aniline autogenic nanoparticles for the delivery of anti-cancer Nano drugs under synchrotron radiation. The enzymatic reaction was optimized by combining an electrokinetic method with a fluoride ion selective electrode in two steps, where the range of critical variables was first determined based on a preliminary "one–variable–at–a–time" (OVAT) procedure for the subsequent full factorial design chemometric analysis. As a result, the impact of the experimental factors, their interactions and also their optimum values were evaluated by the statistical analysis of variance (ANOVA). The optimized model was validated by the assay of dopamine in real samples.

The enzymatic hydrolysis reaction of urea by urease is optimized in this editorial work using an initial rate potentiometric method and the chemometric Response Surface Methodology (RSM). The optimization was based by combining "one–variable–at–a–time" (OVAT) procedure with Response Surface Methodology (RSM) chemometric analysis. As a result, the non–linear nature of the experimental response of the enzymatic reaction system was satisfactory explained by a second order polynomial equation, which revealed the impact of the experimental factors, their interactions and also their optimum values. The results of the reported Response Surface Methodology (RSM) analysis proved; also, to be quite appropriate for the design and optimization of the hydrolysis reaction as illustrated by the relatively high value of the determination coefficient generated by fitting of the quadratic model, along with the satisfactory results obtained by the analysis of variance (ANOVA). In addition, in order to check the quality of the optimization and the validity of the model, the assay of urea, both in aqueous laboratory and human serum samples were performed for treatment of breast cancer brain metastases through a targeted Nanomolecule drug delivery system based on dopamine functionalized Multi–Wall Carbon Nanotubes (MWCNTs) coated with Nano Graphene Oxide (GO) and protonated Polyaniline (PANI) *in situ* during the polymerization of aniline autogenic nanoparticles for the delivery of anti–cancer Nano drugs under synchrotron radiation.

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