



SDI Review Form 1.6

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	Ms_BJAST_32508
Title of the Manuscript:	Research on Oxidation of Phenanthrene to Phenanthrenequinone and its Kinetics
Type of the Article	Research article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1. There are no values of the K_i-rate constants of the reaction, and their dimensions, as well as information on the exponent of concentrations determining the reaction order. 2. It is not clear the value of the relative error between the experimental data and the calculated values. The main indicator of the kinetic model is the value of the relative error, which is not given in the work. As follows from Table 5, there is a significant difference between the calculated and experimental data. Please clarify the Plagiarism: Authors have a published article "Y. J. Luo, Z. Y. Liu, "Studies on the oxidation of phenanthrene to phenanthrenhinone by TBHP," Advanced Materials Research, Vol. 690-693, pp. 1256-1260, 2013 ", which abstract is very similar to an abstract of the submitted article. It is necessary to give a clearer explanation of how they differ.	1. $k_i = k_{i0} \exp(E_i/RT)$ activation energy of the reaction E [J·mol⁻¹] E_i/RT is zero dimension (dimensionless) the reaction rate [mol·L⁻¹·min⁻¹] 2. I agree with the reviewer , but Generally, the kinetic model is examined with Statistical Test(The decisive index : $\rho^2 = 1 - \sum_{j=1}^M (y_j - y'_j)^2 / \sum_{j=1}^M y_j^2$, F examination and Residual Analysis). The decisive index: $\rho^2 = 1 - \sum_{j=1}^M (y_j - y'_j)^2 / \sum_{j=1}^M y_j^2$ Where $\sum_{j=1}^M (y_j - \hat{y}_j)^2$ is the error². The value of the relative error is not given in the work but the value of the error is considered in the decisive index, which means that the value of the relative error is given with the decisive index. The emphasis of the paper "Y. J. Luo, Z. Y. Liu "Studies on the oxidation of phenanthrene to



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		phenanthrenhinone by TBHP,"are 1)Preparation of TBHP and 2) Oxidation of Phenanthrene, No kinetics; The emphasis of this Paper are 1) Oxidation of Phenanthrene and 2) Reaction kinetics, no preparation of TBHP
<u>Minor</u> REVISION comments	3. References to the literature sources are quite old, while the authors have a published article "Y. J. Luo, Z. Y. Liu, "Studies on the oxidation of phenanthrene to phenanthrenhinone by TBHP," Advanced Materials Research, Vol. 690-693, pp. 1256-1260, 2013 ", which abstract is very similar to an abstract of the submitted article. It is necessary to give a clearer explanation of how they differ.	The emphasis of the paper "Y. J. Luo, Z. Y. Liu "Studies on the oxidation of phenanthrene to phenanthrenhinone by TBHP,"are 1)Preparation of TBHP and 2) Oxidation of Phenanthrene, No kinetics; The emphasis of this Paper are 1) Oxidation of Phenanthrene and 2) Reaction kinetics, no preparation of TBHP
<u>Optional/General</u> comments	Authors should be added the information specified by the reviewer	I agree