



SDI Review Form 1.6

Journal Name:	Journal of Materials Science Research and Reviews
Manuscript Number:	Ms_JMSRR_50518
Title of the Manuscript:	Optimization of process parameters for the treatment of Crude oil spill polluted water surface by sorption technique using fatty acid grafted ogbono shell as a sorbent
Type of the Article	Original 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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

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	<ol style="list-style-type: none"> There are so many errors and mistakes so the manuscript should be checked and rechecked many times. Page 1. Line 3 should read "...spill polluting water..." Page 1. Line 9 should read "...for 4 h and then...". This short form of hours should be used consistently all over the manuscript. Page 11. Line 10 should read "...was studied by Scanning Electron Microscope (SEM) while...". After this the acronym SEM can be used without mentioning the full words. Page 11. Line 10 should read "...while functional groups were investigated by Fourier Transform Infrared Spectroscopy (FTIR). Proximate analysis..." Page 1. Line 17 should read "The theoretical optimum conditions for oil spill treatment include 10 min time, 60 °C temperature, 1.4 g dosage and pH 3 with removal percentage of 78.77% and the actual percentage in good agreement of 76.40%. Page 1. Line 20 should read "Keywords" Page 1. Line 20. The keywords should read "crude oil adsorption" Page 1. Line 20. The keywords should include "surface modification" Page 1. Line 25 should read "...depending on the structure of..." Page 1. Line 26 should read "...have been on the front burner in environmental..." Page 1. Line 29 should read "...2012). In seawater and soil it is usually a result of..." Page 1. Line 30 should read "...2002). The spillage can be broadly categorized into..." Page 2. Line 35 should read "...human health and can be managed by a wide range of tools and techniques among which include chemical remediation,...." Page 2. Line 38 should read "...is of greater interest..." Page 2. Line 43 should read "...2003). These agro wastes..." Page 2. Line 43 should read "...locally. This work focuses on optimizations of..." Page 2. Line 44 should read "...(RSM) which is a statistical tool designed specifically for this purpose. Its usage..." Page 2. Line 49 should read "The most often used RSM types are central..." or 	<p>2, corrected as directed</p> <p>3corrected as directed</p> <p>4 corrected as directed</p> <p>5 corrected as directed</p> <p>6 corrected as directed</p> <p>7 corrected as directed</p> <p>8 corrected as directed</p> <p>9 corrected as directed</p> <p>10 corrected as directed</p> <p>11 corrected as directed</p> <p>12 corrected as directed</p> <p>13 corrected as directed</p> <p>14 corrected as directed</p> <p>15 corrected as directed</p> <p>16 corrected as directed</p> <p>17 corrected as directed</p> <p>18 corrected as directed</p> <p>19 corrected as directed</p> <p>20 Because they are more user friendly and also relates products properties by using regression equations that describe interrelations between input variables and product properties</p> <p>21 corrected as directed</p> <p>22 corrected as directed</p> <p>23 corrected as directed</p> <p>24 corrected as directed</p> <p>25 corrected as directed</p> <p>26 corrected as directed</p> <p>27 corrected as directed</p> <p>28 corrected as directed</p>



SDI Review Form 1.6

	<p>even better “The most common RSM’s include central...”</p> <p>20. Page 2. Line 50. What are the reasons why CCD and BBD are the most common?</p> <p>21. Page 2. Line 52 should read “..using BBD design.” This acronym after firstly mentioned should be used throughout the text consistently.</p> <p>22. Page 2. Line 60 should read “..HCl,...”. Where are these materials and chemicals from?</p> <p>23. Page 3. Line 35. The container material must be clearly specified. Plastic? Metal? Glass?</p> <p>24. Page 3. Line 67 should read 0.5 g of stearic acid in 200 mL of..”</p> <p>25. Page 3. Line 69 should read “..as a catalyst.”</p> <p>26. Page 3. Line 69 should read “..in Dean-Stark apparatus..” and “..for 4 h.”</p> <p>27. Page 3. Line 70 should read “..were washed several times with..”</p> <p>28. Page 3. Line 71 should read “..for 12 h (Banerjee et al., 2006) and kept in dry tightly closed bottles for further use. The weight percentage can be calculated as follows.”</p> <p>29. Page 4. Line 91 should read “..stirred for different periods of time to ensure..”. The range should be specified as well, probably in parenthesis after the word “time”.</p> <p>30. Page 4. Line 93 should read “...at different temperatures in the range of (to be added.).”</p> <p>31. Page 4. Line 94 should read “The mixture was then stirred again for different experimented time (specified, at least the range).”</p> <p>32. Page 4. Line 94 should read “After that the mixture was...”</p> <p>33. Page 4. Line 95 should read “..a net of approximately 250 µm grid.” Would it be better to specify in the unit of mesh?</p> <p>34. Page 4. Line 96 should read “..was recorded. The net..”</p> <p>35. Page 4. Line 97 should read “..for 24 h before..”. The net was allowed to stay for what? The reason should be stated clearly.</p> <p>36. Page 4. Line 98 should read “..the equation below:”</p> <p>37. Page 4. Line 107 should read “..using BBD. The independent..” BBD is one of RMS, right [Page 2. Line 50]?</p> <p>38. Page 4. Line 108 should read “(min),..”</p> <p>39. Page 5. Line 116 should read “Using BBD (a statistical..”</p> <p>40. Page 6. Line 130 should read “..in Table 3 to have low fixed carbon,.....” No need for repetition.</p> <p>41. Page 6. Line 133 should read “..activated biomass together with the modification with stearic acid to increase the number of micropores improved the surface area of biomass for adsorption from 114 cm² to 190.5 cm² similar to the results of acetylated oboono shell by Alothman et al., 2011.</p> <p>42. Page 6. The pH of Table 3 has not been discussed.</p> <p>43. Page 6. Line 144 should read “...modification. As shown in Fig. 1, there were..”</p> <p>44. Page 6. Line 146 should read “..surface reaction. It was observed..” Unnecessary sentence must be omitted.</p> <p>45. Page 7. Line 148 should read “..from Fig. 1 that...” and “...together. It can also be observed..”</p> <p>46. Page 7. Line 155. The sentence “ Some minute....evident.” is not understandable and must be rewritten.</p> <p>47. Page 7. Line 157 should read “..the microporous surface.”</p> <p>48. Page 7. Line 158. What does it mean by “undergone properly”?</p> <p>49. Page 7. Line 148 should read “..a number of micropores.”</p> <p>50. Page 8. Line 168-171 should read “Fourier transform infrared spectra of the raw biomass, carbonized biomass, and esterified biomass are presented in Fig. 3-5. The bands were assigned according to those in previous literature</p>	<p>29 corrected as directed</p> <p>30 corrected as directed</p> <p>31 corrected as directed</p> <p>32 corrected as directed</p> <p>33 corrected as directed</p> <p>34 corrected as directed</p> <p>35 corrected as directed</p> <p>36 corrected as directed</p> <p>37 corrected as directed</p> <p>38 corrected as directed</p> <p>39 corrected as directed</p> <p>40 corrected as directed</p> <p>41 corrected as directed</p> <p>42 corrected as directed</p> <p>43 corrected as directed</p> <p>44 corrected as directed</p> <p>45 corrected as directed</p> <p>47 corrected as directed</p> <p>48 sentence not necessary, has been removed</p> <p>49 corrected as directed</p> <p>50 corrected</p> <p>51 corrected</p> <p>52 corrected</p> <p>53 corrected</p> <p>54 corrected</p> <p>55 corrected</p> <p>56 corrected</p> <p>57 corrected</p> <p>58 corrected</p> <p>59 corrected</p> <p>60 corrected</p> <p>61 corrected</p> <p>62 corrected</p> <p>63 corrected</p>
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SDI Review Form 1.6

	<p>(Starsinic et al., 1984; Supaluknari et al., 1998). The biomass sample (ogbono shell) was found to have..." Unnecessary sentence must be omitted.</p> <p>51. Page 8. Line 181 should read "..., conjugated ketones, open..."</p> <p>52. Page 9. Line 188 should read "...as shown in Fig. 5 indicating that the peaks are more resolved than those as shown in..."</p> <p>53. Page 9. Line 193 should read "...the reasons why they were..."</p> <p>54. Page 9. Line 197 should read "...more lignin content."</p> <p>55. Page 10. Line 208-209 should read "BBD was used with the process to determine optimum conditions for crude oil sorption. A set of 27..."</p> <p>56. Page 12. Line 246 should read "...were presented in..."</p> <p>57. Page 13. Line 268 should read "...the straight line..."</p> <p>58. Page 14. Line 280 should read "...at a time while maintaining..."</p> <p>59. Page 14. Line 282. The sentence "These plots.....value." has no conjunction.</p> <p>60. Page 14. Line 287 should read "From Fig. (specified), it was..."</p> <p>61. Page 14. Line 295 should read "...in Fig. 7."</p> <p>62. Page 15. Line 313 should read "...biomass. The curved shape of the contour indicates a good..."</p> <p>63. Page 15. Line 314 should read "...high pH; high temperature, low..."</p> <p>64. Page 16. To make it concise, Line 329 should read "The optimum solutions are given in Table 5 including 10 min time, 60 °C temperature, (and so on)"</p> <p>65. Page 16. Line 331 should read "The theoretical removal percentage..."</p> <p>66. Page 16. Line 334 should read "...as shown in Table 5."</p> <p>67. Page 16. Line 335. The caption of Table 5 should read "The theoretical optimum solutions for esterified ogbono shell with the comparative removal percentage"</p> <p>68. Page 16. Line 335. What does it mean by "Selected" in Table 5?</p> <p>69. Page 16. Line 339 should read "This comparative study revealed that..."</p> <p>70. Page 17. Line 343 should read "conjugated ketones"</p> <p>71. Page 17. Line 343. In the text, silicon and peroxide have not been discussed and what is the point of having it?</p> <p>72. Page 17. Line 344 should read "...using Scanning..." Actually only the acronym can be used because it has already been mentioned and it is quite well-known.</p> <p>73. Page 17. Line 348 should read "...the process including time, temperature, dosage and pH statistically significant." Should the values be presented here at the end as conclusive results? Should future aspects be suggested here at the end of the conclusion?</p> <p>74. Page 18. Line 380. The name of the journal should be italicized.</p> <p>75. Page 18. Line 387. The name of the journal should be italicized.</p> <p>76. Page 18. Line 395. More information of the reference must be provided.</p> <p>77. Page 18. Line 399. The name of the journal should be italicized.</p> <p>78. Page 19. Line 402. The name of the journal should be italicized.</p>	<p>64 corrected</p> <p>65 corrected</p> <p>66 corrected</p> <p>67 corrected</p> <p>68 the software gives lots of solutions after analysis From which one can be selected but it is not necessary to show the word selected and has been removed</p> <p>69 corrected</p> <p>70 corrected</p> <p>71 silicon and peroxide removed</p> <p>72 corrected</p> <p>73 corrected</p> <p>74 corrected</p> <p>75 corrected</p> <p>76 corrected</p> <p>77 corrected</p> <p>78 corrected</p>
Minor REVISION comments		



SDI Review Form 1.6

Optional/General comments		
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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	A big thank you to science domain and in particular the reviewer of this manuscript, nice job keep it up