



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	Ms_IRJPAC_41667
Title of the Manuscript:	Surface Acidity of the Supported Molybdenum oxide Catalysts Probed by Potentiometric Titration of n-butyl amine
Type of the Article	Original Research Article

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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	This is a very short article showing only potentiometric measurements, however some other data are relevant....amount of Mo on each sample which can be differente from nominal composition, surface area of alumina, some other charachterization like xps to see the electronic state of Mo, some IR measurement. I found the manuscript well written but short in data ane need mayor ammendment Several subindex are missing: $E_i < 0$ (weak sites) and E_i ----i is a subindex (NH₄)₆ Mo₇ O₂₄.4H₂O,---4, 6 and so one are subindex Also units....m²/g).....2....is a supraindex The free water was removed by evaporation at 120 Co for 1 h....it measn 120 degree centigrade??? Or Cobalt? Letter font mixed: model using a double junction electrode. (TNR) 90 3. Results and Discussion (ARIAL) 91 The surface acidity measurements Table. 2 is wrong....Table 2..... See "table 2" in the main text `please uniform format. References, check all, some journal in bold, some other in italic, some with capitals some common letters.... Table format must be improved	Regarding xps, yes it is good technique to be used for characterization but unfortunately we don't have this technique. On the other hand, the acid strength of these sites may be classified according to the following scale [32,34] $E_i > 100$ mV (very strong sites), $0 < E_i < 100$ mV (strong sites), $-100 < E_i < 0$ (weak sites) and $E_i < -100$ mV (very weak sites). Ammonium heptamolybdate (AHM), (NH₄)₆Mo₇O₂₄.4H₂O, high purity (Merck) was used as precursor for supported and unsupported MoO_x catalysts. using alumina of high surface area (100 ± 10 m²/g) aluminum oxide (Degussa AG, Frankfurt, Germany) and silica (200 ± 10 m²/g), The free water was removed by evaporation at 390 K for 1 h. 3. Results and Discussion The surface acidity measurements of the prepared catalysts by means of potentiometric titration with n-butylamine in acetonitrile [37] were used to estimate the amount of acid sites and their relative acid strength according to the value of the initial electrode potential (E_i). n-butylamine is a strong base and can be adsorbed on acid sites of different strength and types, thus it titrates both Lewis and Brønsted sites [38] . Table 2: The surface acidity of alumina supported molybdena and sulfated catalysts. 5. References [1] J. R. Shon, <i>J. Indus. Eng. Chem.</i>, 10 (1) (2004) 1. [2] K. Tanabe, M. Misono, Y. Ono and H. Hattori, "New Solids Acids And Bases," Elsevier Science Publisher B-V, Amsterdam (1989) 300. [3] K. Arata, "Solid Superacids," <i>Advances in Catalysis</i>, 37 (1990) 165. [4] B. H. Davis, R. A. Keogh and R. Srinivasan, <i>Catal. Today</i>, 20 (20) (1994) 219. [5] A. Clearfield, G. P. D. Serrette and A. H. Khazi-Syed, <i>Catal. Today</i>, 20 (1994) 295.
Minor REVISION comments		
Optional/General comments		