

Review Form 1.6

Journal Name:	Chemical Science International Journal
Manuscript Number:	Ms_CSIJ_83663
Title of the Manuscript:	Effect of alkaline additives over V-based catalysts supported on γ -Al ₂ O ₃ for propane oxidative dehydrogenation
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:

(<https://www.journalcsij.com/index.php/CSIJ/editorial-policy>)

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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		
Minor REVISION comments	<p><u>Page 1</u> a) Verb ending</p> <p>Introduction</p> <p><u>Line 4</u> dehydrogenation [2-4]. Recently, the growing global olefins demands has stimulate the dehydrogenation [2-4]. Recently, the growing global olefins demands has stimulated the</p> <p><u>Page 2</u></p> <p>b) delete connector</p> <p>Introduction</p> <p><u>Line 25</u> with the potassium additive and concluded that K strongly inhibited the consecutive propene with the potassium additive concluded that K strongly inhibited the consecutive propene</p> <p><u>Page 4</u></p> <p>c) Change the name of the described variable. It does not correspond to the symbols used in formula 5</p> $SRR = \frac{X_{isop} (\%) \times F_{isop}}{W \times S_g} \quad (5)$ <p>gaseous carbon-containing product "j", F_{Ad} is the reactor outflow of isopropanol, W is the gaseous carbon-containing product "j", F_{isop} is the reactor outflow of isopropanol, W is the</p> <p><u>Page 10</u></p> <p>d) Place identification on the figures to facilitate reading</p>	

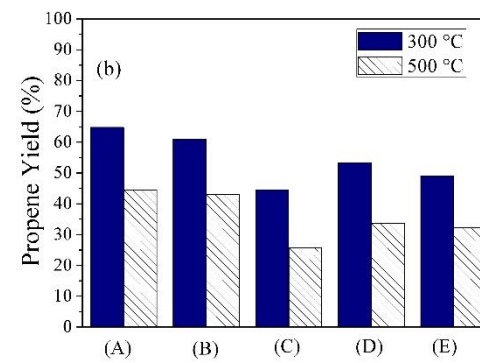
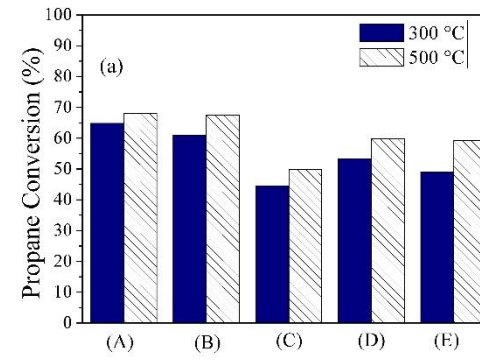
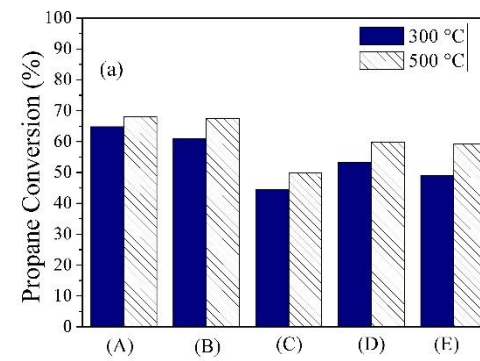
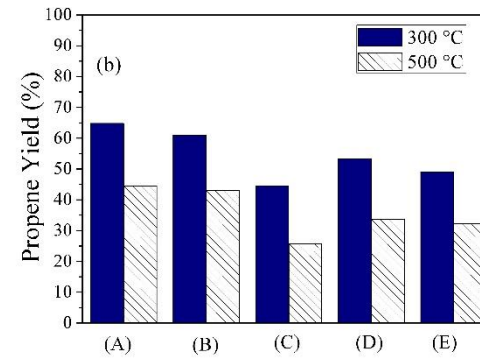


Fig. 6. Propane conversion (a) and propene yield (b) of the following catalysts during propane oxidative dehydrogenation: (A) 4V-Al (B); (B) 4V-0.5Na-Al (B); (C) 4V-1.0Na-Al (B); (D) 4V-0.5K-Al (B); (E) 4V-1.0K-Al (B)



(a)



(b)
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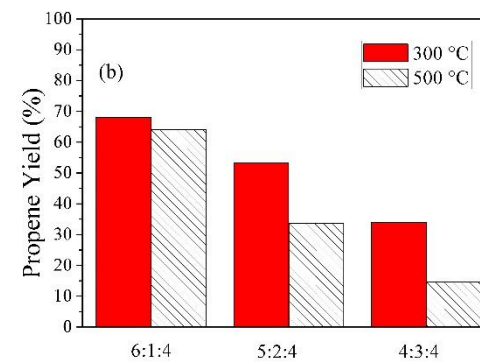
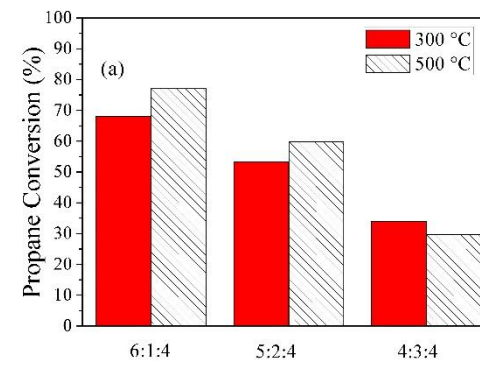


Fig. 8. Propane conversion (a) and propene yield (b) of the 4V-0.5K-Al (B) catalyst at different O₂:C₃H₈:He molar ratios of 6:1:4, 5:2:4 and 4:3:3

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	<p>(a)</p> <table border="1"> <caption>Propane Conversion (%)</caption> <thead> <tr> <th>Molar Ratio</th> <th>300 °C</th> <th>500 °C</th> </tr> </thead> <tbody> <tr> <td>6:1:4</td> <td>~68</td> <td>~78</td> </tr> <tr> <td>5:2:4</td> <td>~52</td> <td>~60</td> </tr> <tr> <td>4:3:4</td> <td>~32</td> <td>~30</td> </tr> </tbody> </table> <p>(b)</p> <table border="1"> <caption>Propene Yield (%)</caption> <thead> <tr> <th>Molar Ratio</th> <th>300 °C</th> <th>500 °C</th> </tr> </thead> <tbody> <tr> <td>6:1:4</td> <td>~68</td> <td>~65</td> </tr> <tr> <td>5:2:4</td> <td>~52</td> <td>~35</td> </tr> <tr> <td>4:3:4</td> <td>~32</td> <td>~15</td> </tr> </tbody> </table> <p>Fig. 8. Propane conversion (a) and propene yield (b) of the 4V-0.5K-Al (B) catalyst at different O₂:C₃H₈:He molar ratios of 6:1:4, 5:2:4 and 4:3:3</p>	Molar Ratio	300 °C	500 °C	6:1:4	~68	~78	5:2:4	~52	~60	4:3:4	~32	~30	Molar Ratio	300 °C	500 °C	6:1:4	~68	~65	5:2:4	~52	~35	4:3:4	~32	~15	
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<p>Optional/General comments</p>																										

PART 2:

	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)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

Reviewer Details:

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