

Supporting Info

Statistically Guided Synthesis of MoV-Based Mixed Oxide Catalysts for Ethane Partial

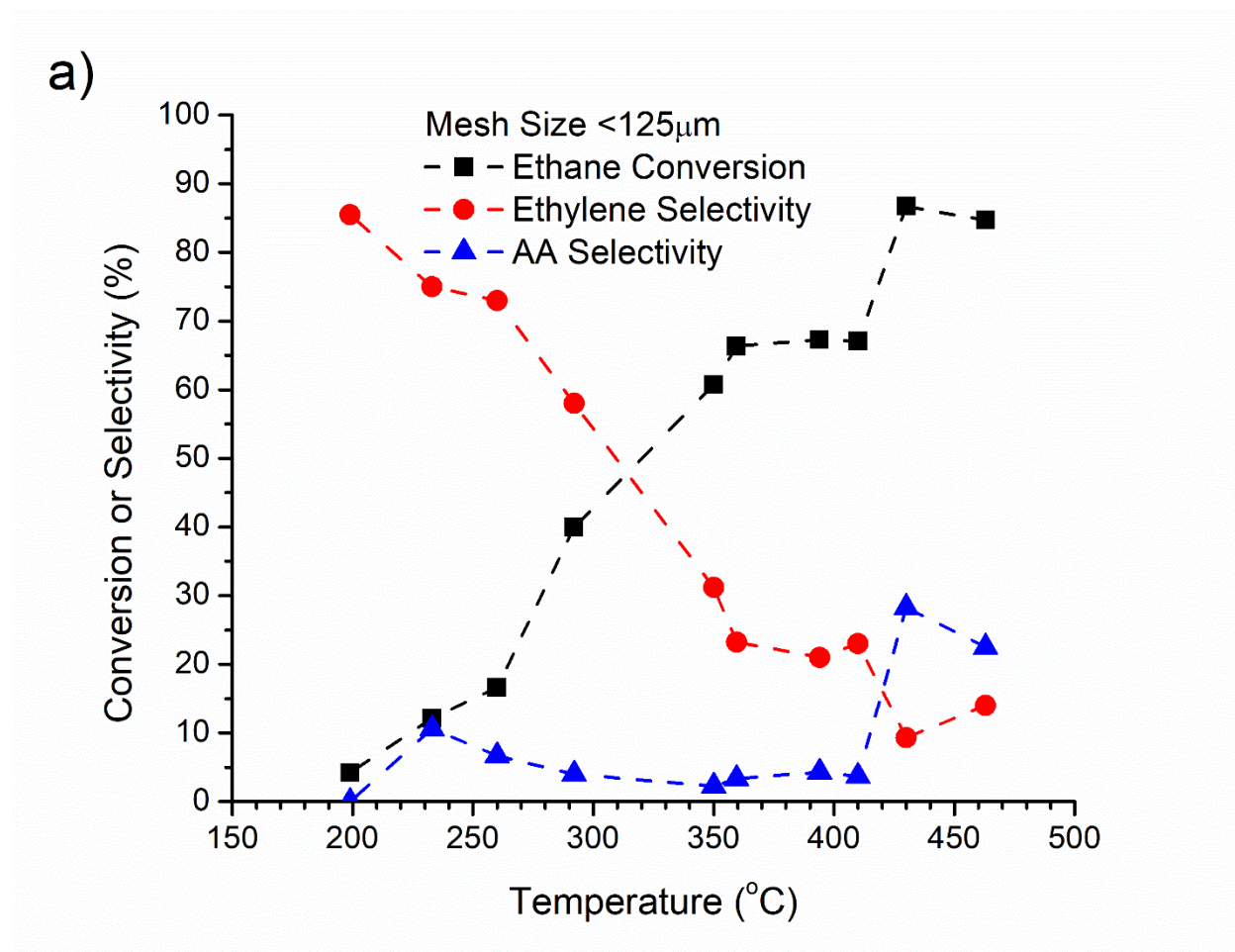
Oxidation

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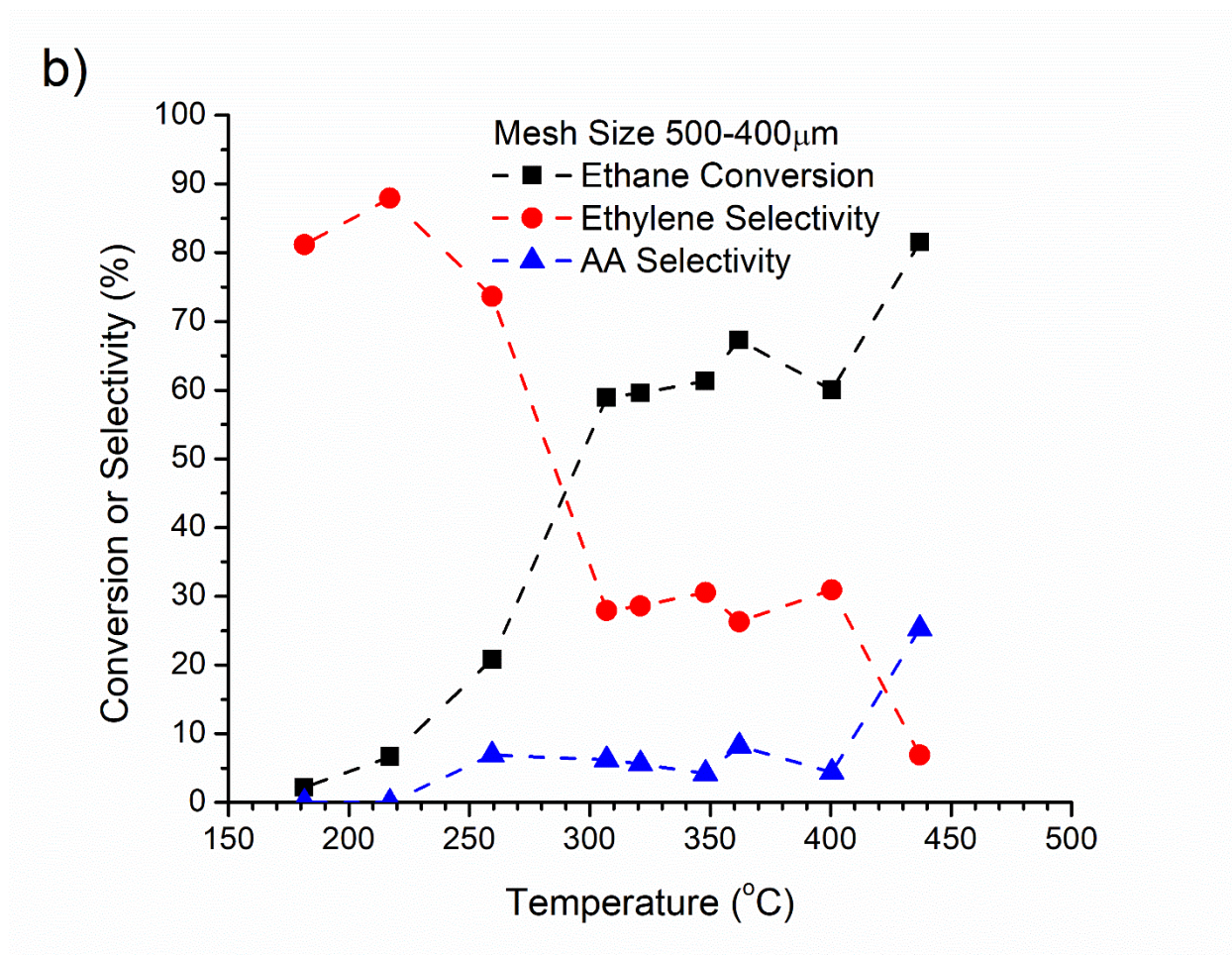


Figure 1. Selected reproducibility studies on (a) <125 μ m, and b) 500-400 μ m mesh sizes.

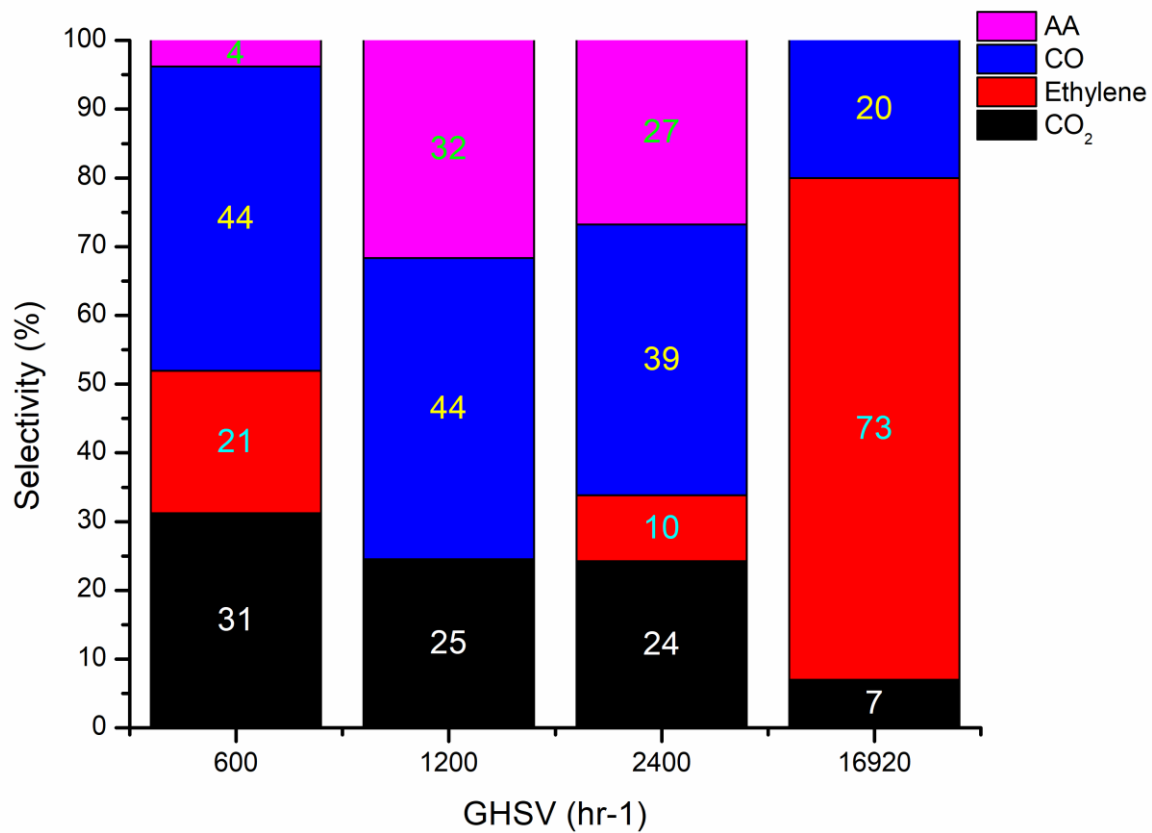


Figure 2. Product distribution at varied GHSV for base MoVNb.

Table 1. MoVNb_(H=1)[R_RA_A]_D Catalyst Formulation Standard Orders

	PdK	PdCs	PdTe	NiK	NiCs	NiTe	TiK	TiCs	TiK
R/A=0.005 D/H=0.005	1	10	19	28	37	46	55	64	73
R/A=0.005 D/H=0.5	2	11	20	29	38	47	56	65	74
R/A=0.005 D/H=1	3	12	21	30	39	48	57	66	75
R/A=0.5 D/H=0.005	4	13	22	31	40	49	58	67	76
R/A=0.5 D/H=0.5	5	14	23	32	41	50	59	68	77
R/A=0.5 D/H=1	6	15	24	33	42	51	60	69	78
R/A=1 D/H=0.005	7	16	25	34	43	52	61	70	79
R/A=1 D/H=0.5	8	17	26	35	44	53	62	71	80
R/A=1 D/H=1	9	18	27	36	45	54	63	72	81

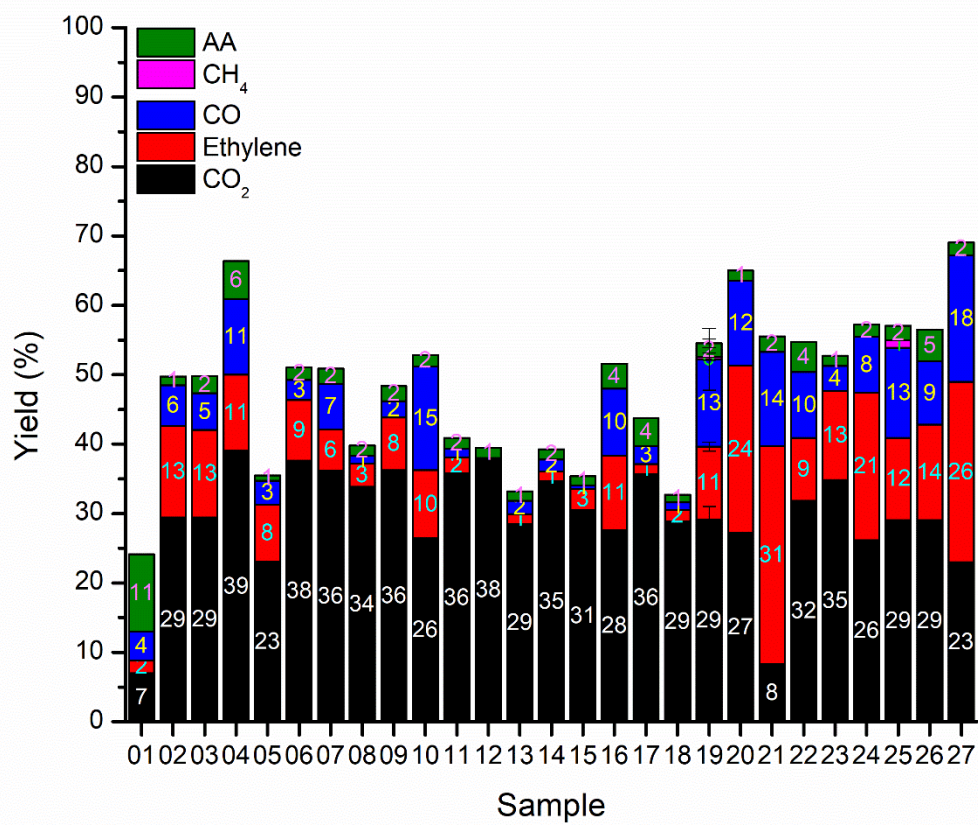


Figure 3. Product distribution at 450 °C for Pd-doped MoVNb.

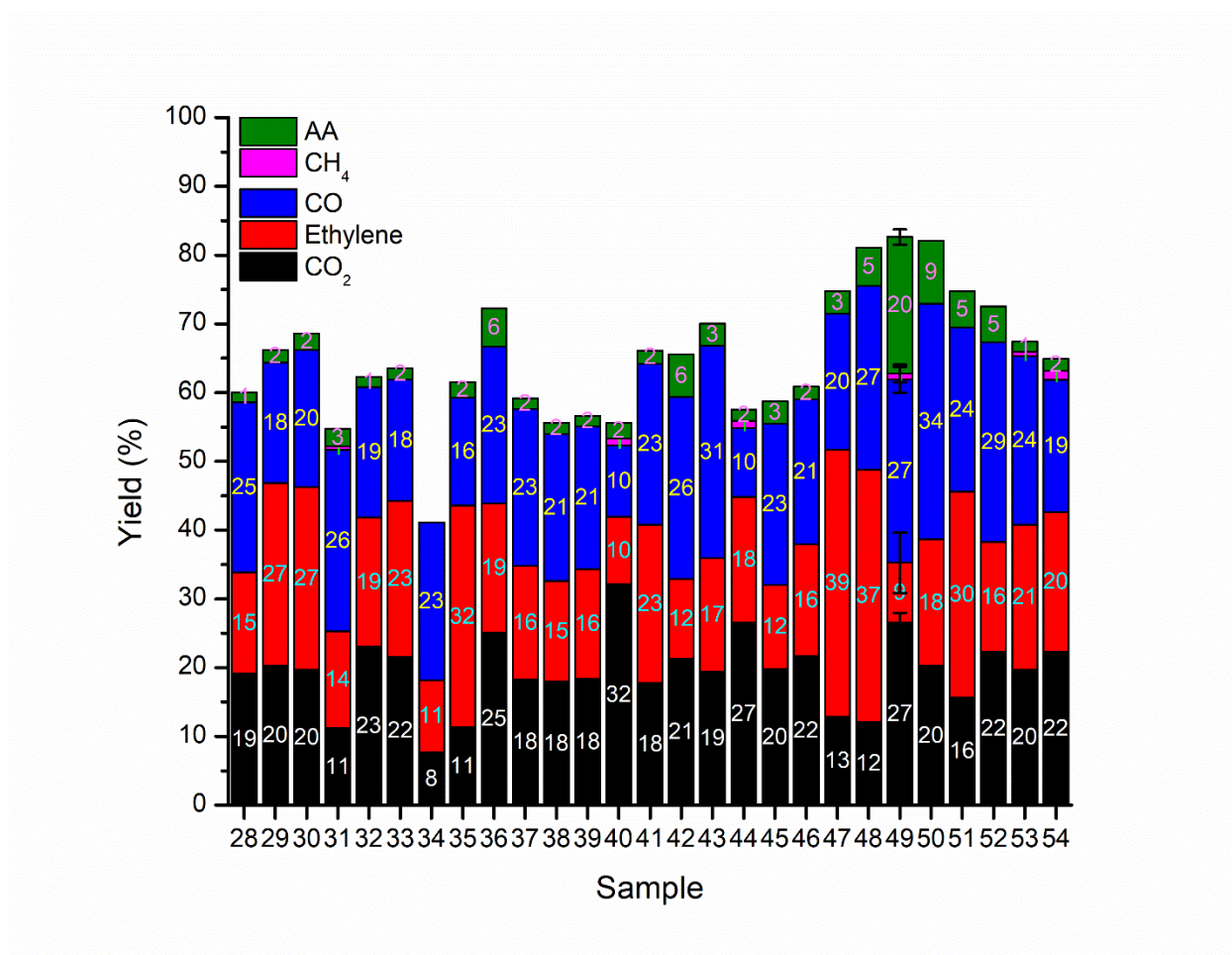


Figure 4. Product distribution at 450 °C for Ni-doped MoVNb.

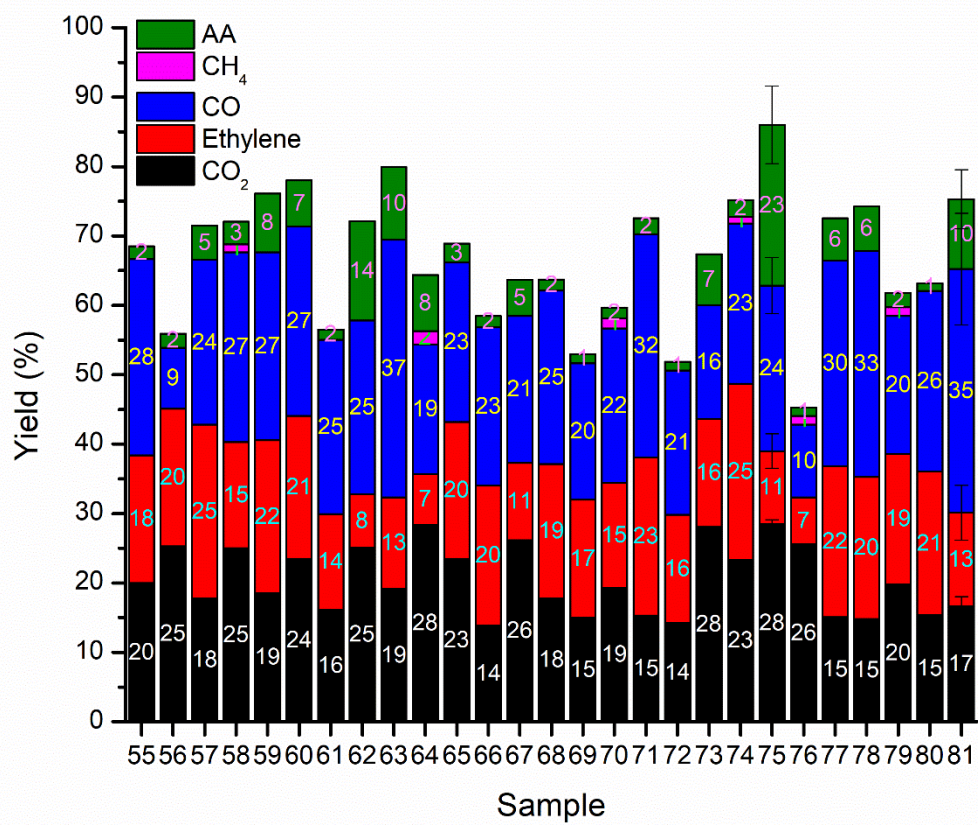


Figure 5. Product distribution at 450 °C for Ti-doped MoVNb.