FIG. 1

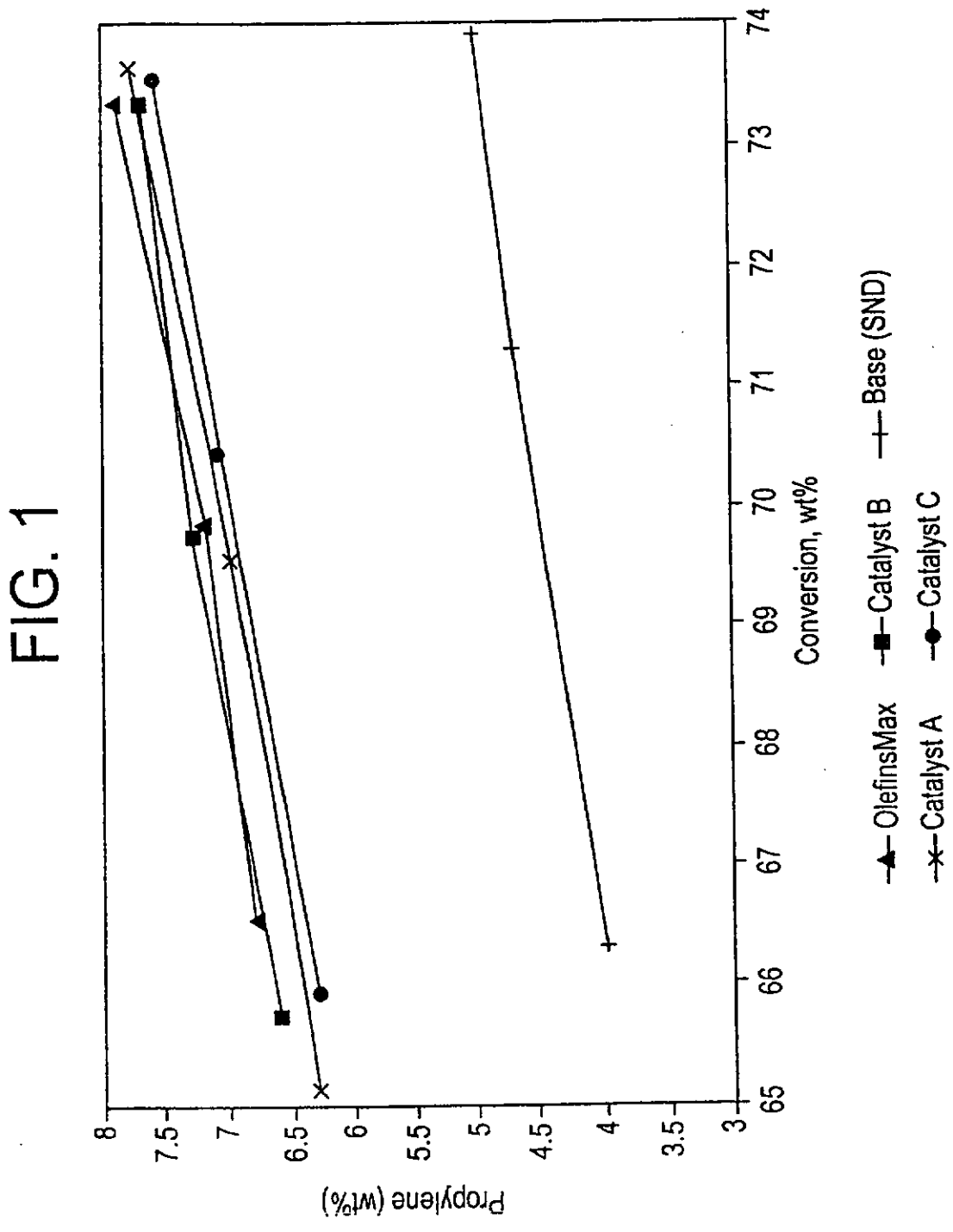

Propylene (wt%)
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
65
66
67
68
69
70
71
72
73
74
Conversion, wt%
OlefinsMax
Catalyst B
Base (SND)
Catalyst A
Catalyst C

FIG. 2

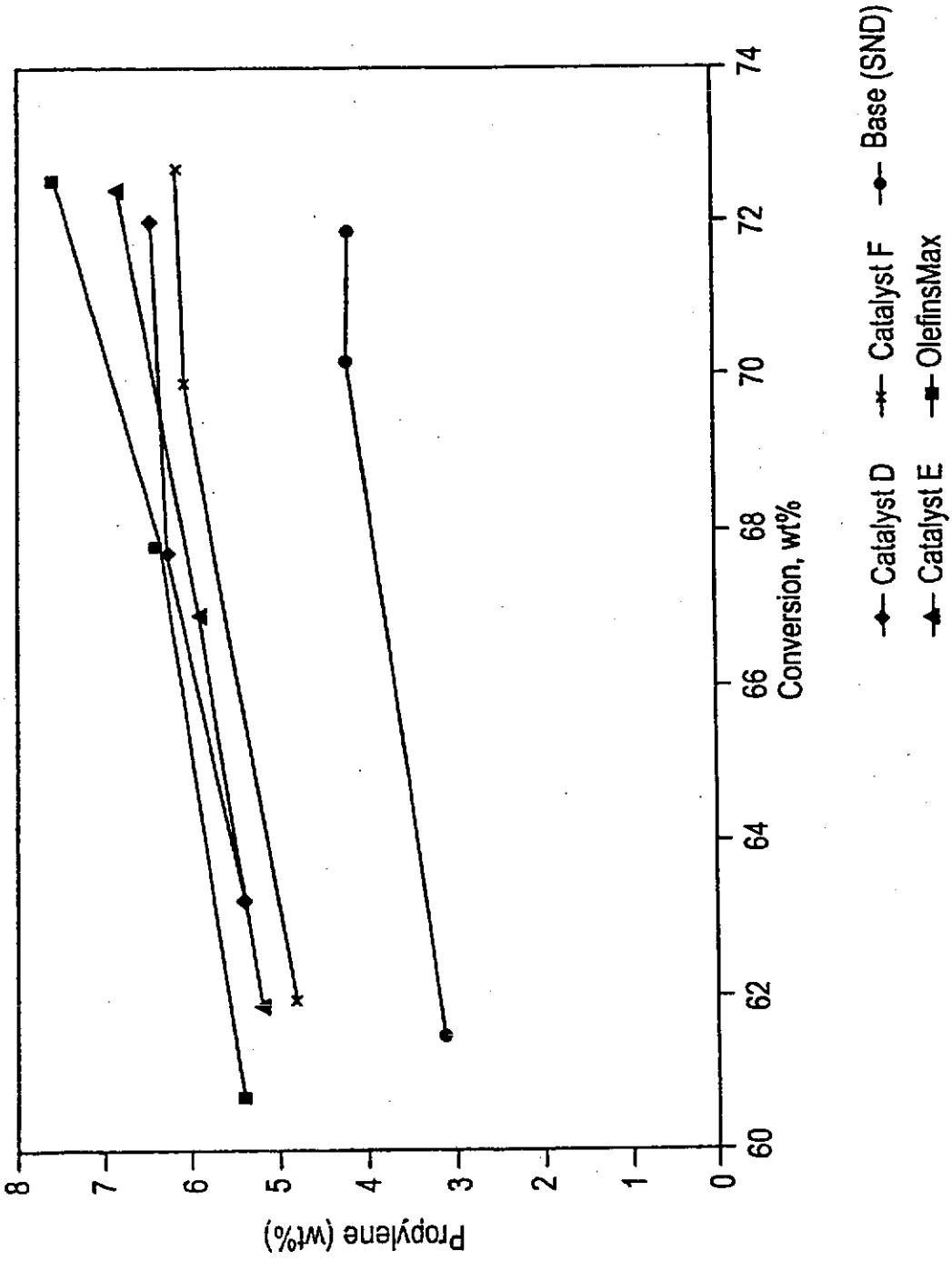

Propylene (wt%)
0
1
2
3
4
5
6
7
8
60
62
64
66
68
70
72
74
Conversion, wt%
Catalyst D
Catalyst E
Catalyst F
OlefinsMax
Base (SND)

FIG. 3

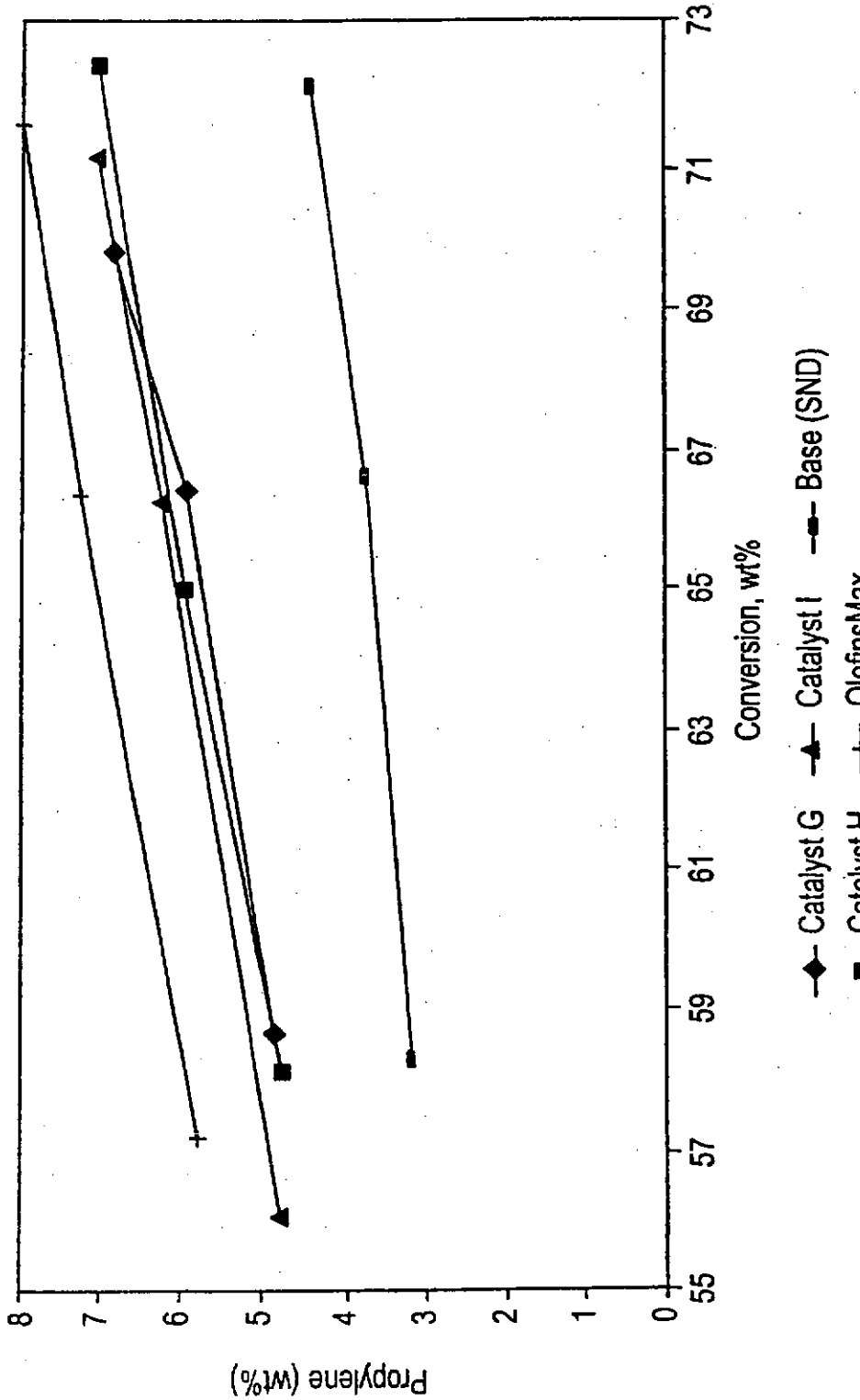

Propylene (wt%)
0
1
2
3
4
5
6
7
8
55
57
59
61
63
65
67
69
71
73
Conversion, wt%
Catalyst G
Catalyst I
Base (SND)
Catalyst H
OlefinsMax

FIG. 4

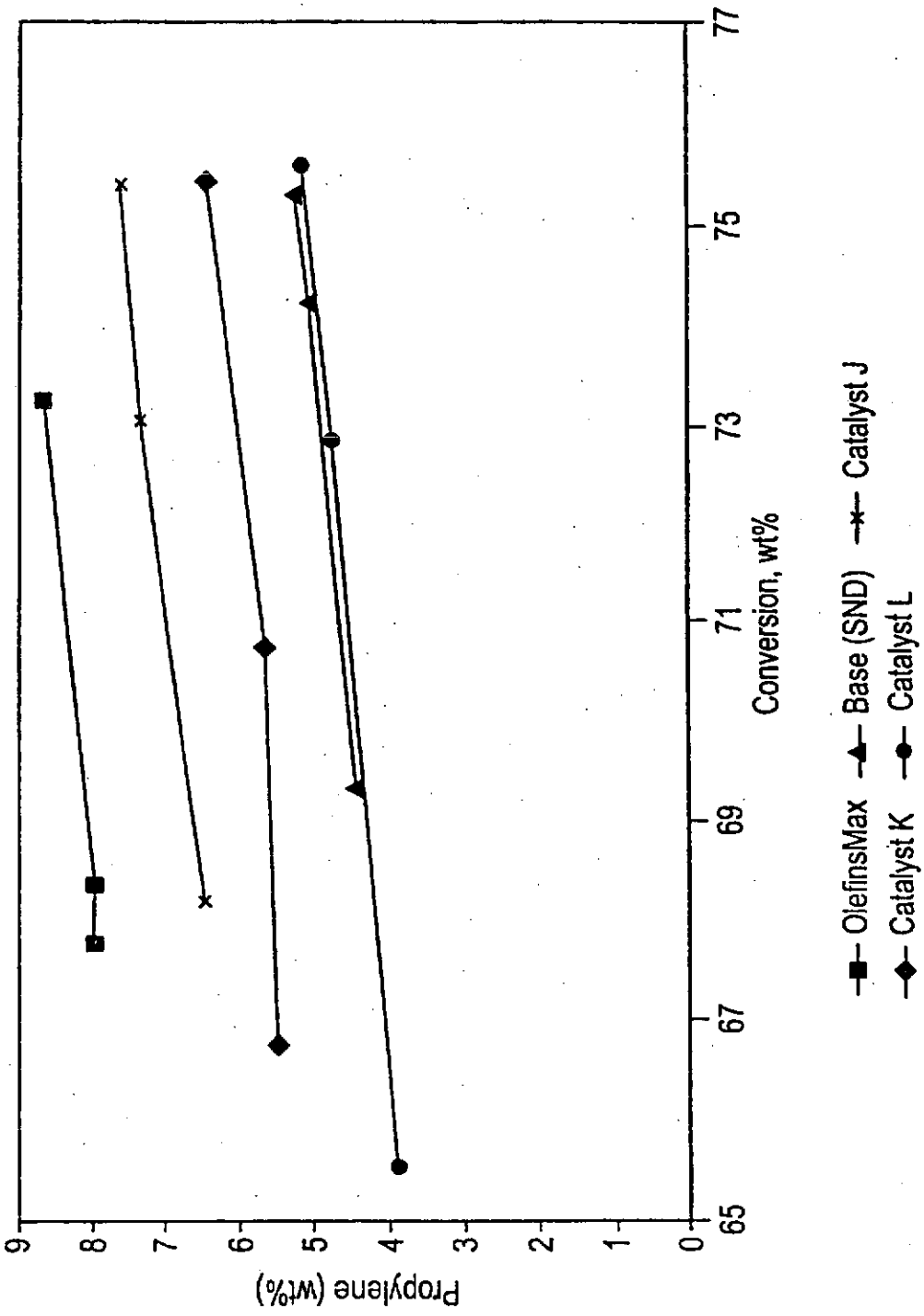

Propylene (wt%)
0
1
2
3
4
5
6
7
8
9
65
67
69
71
73
75
77
Conversion, wt%
OlefinsMax
Base (SND)
Catalyst J
Catalyst K
Catalyst L

FIG. 5

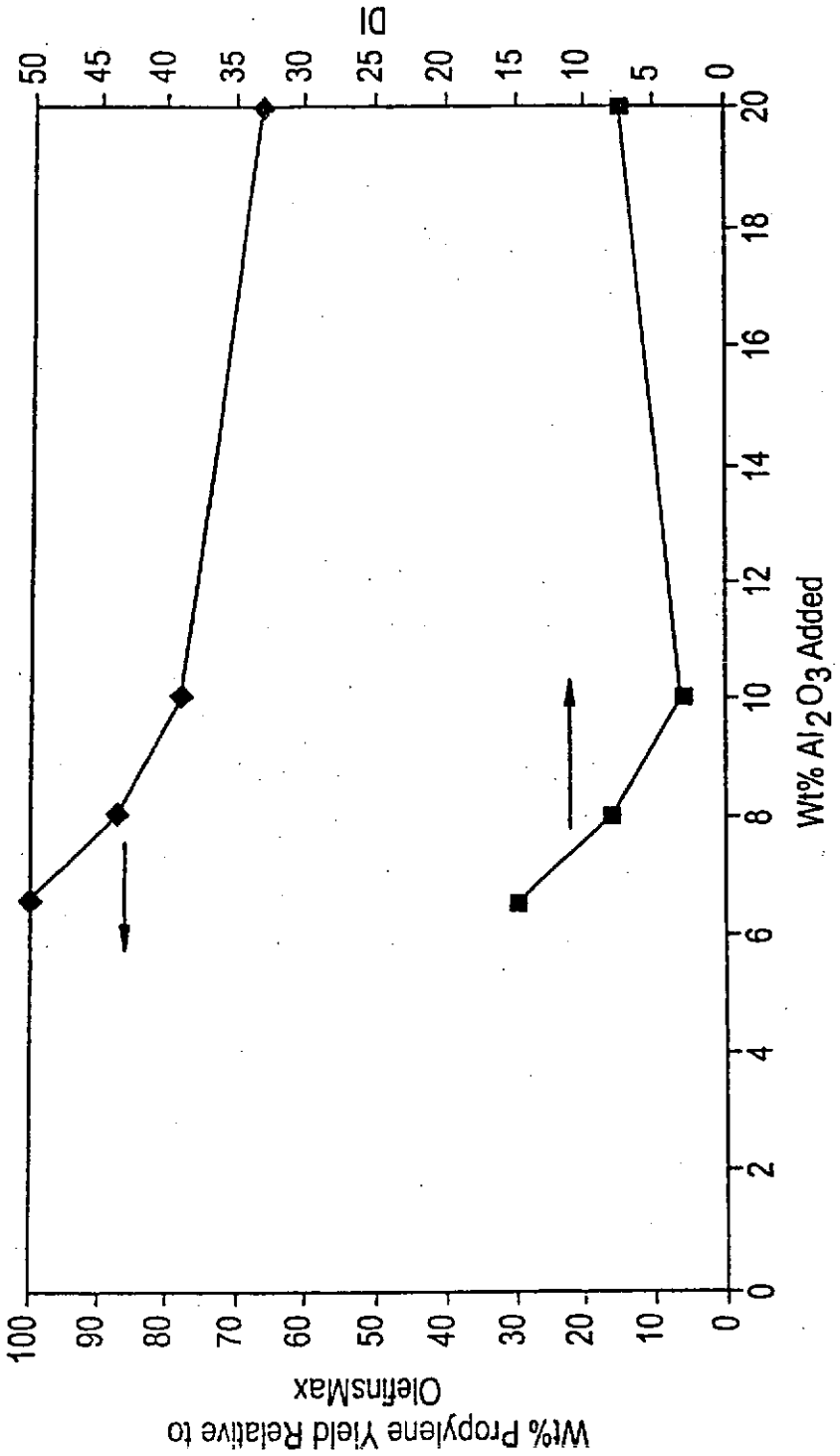

Wt% Propylene Yield Relative to OlefinsMax
DI
Wt% Al_2O_3 Added
0
10
20
30
40
50
60
70
80
90
100
0
5
10
15
20
25
30
35
40
45
50
0
2
4
6
8
10
12
14
16
18
20

FIG. 6

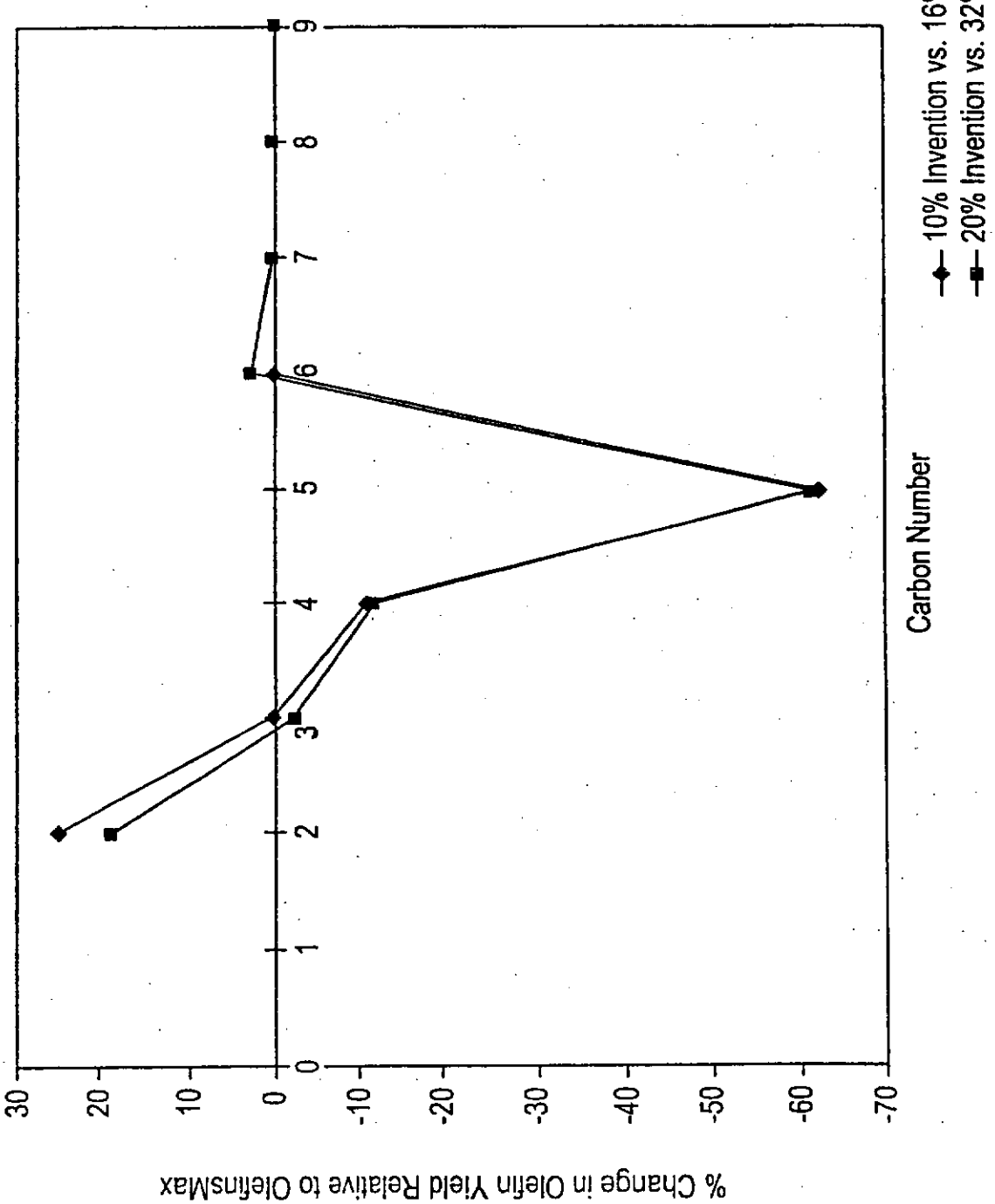

% Change in Olefin Yield Relative to OlefinsMax
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0
1
2
3
4
5
6
7
8
9
Carbon Number
10% Invention vs. 16% OM
20% Invention vs. 32% OM

FIG.7

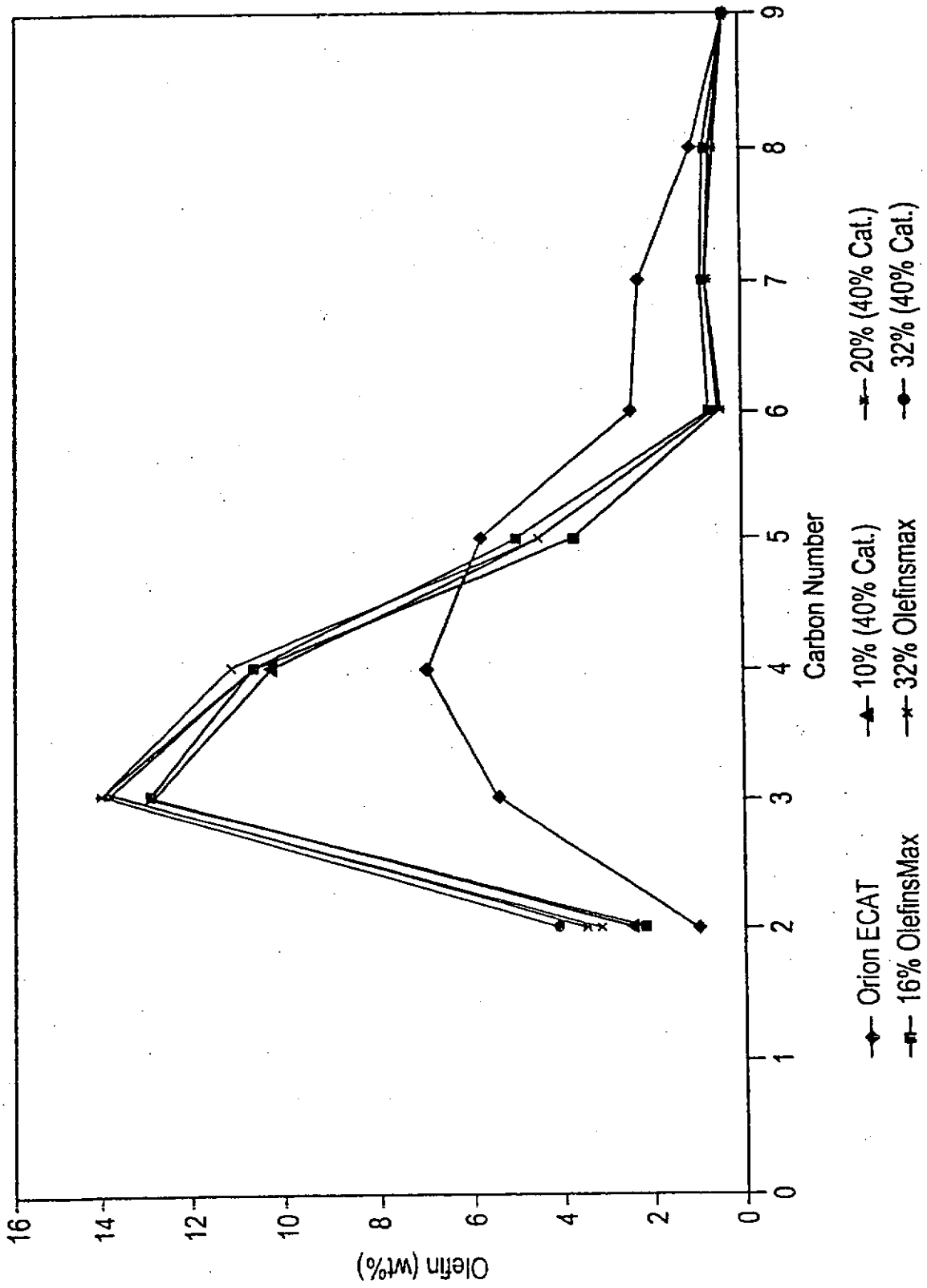

Olefin (wt%)
16
14
12
10
8
6
4
2
0
0
1
2
3
4
5
6
7
8
9
Carbon Number
Orion ECAT
16% OlefinsMax
10% (40% Cat.)
32% Olefinsmax
20% (40% Cat.)
32% (40% Cat.)

FIG. 8

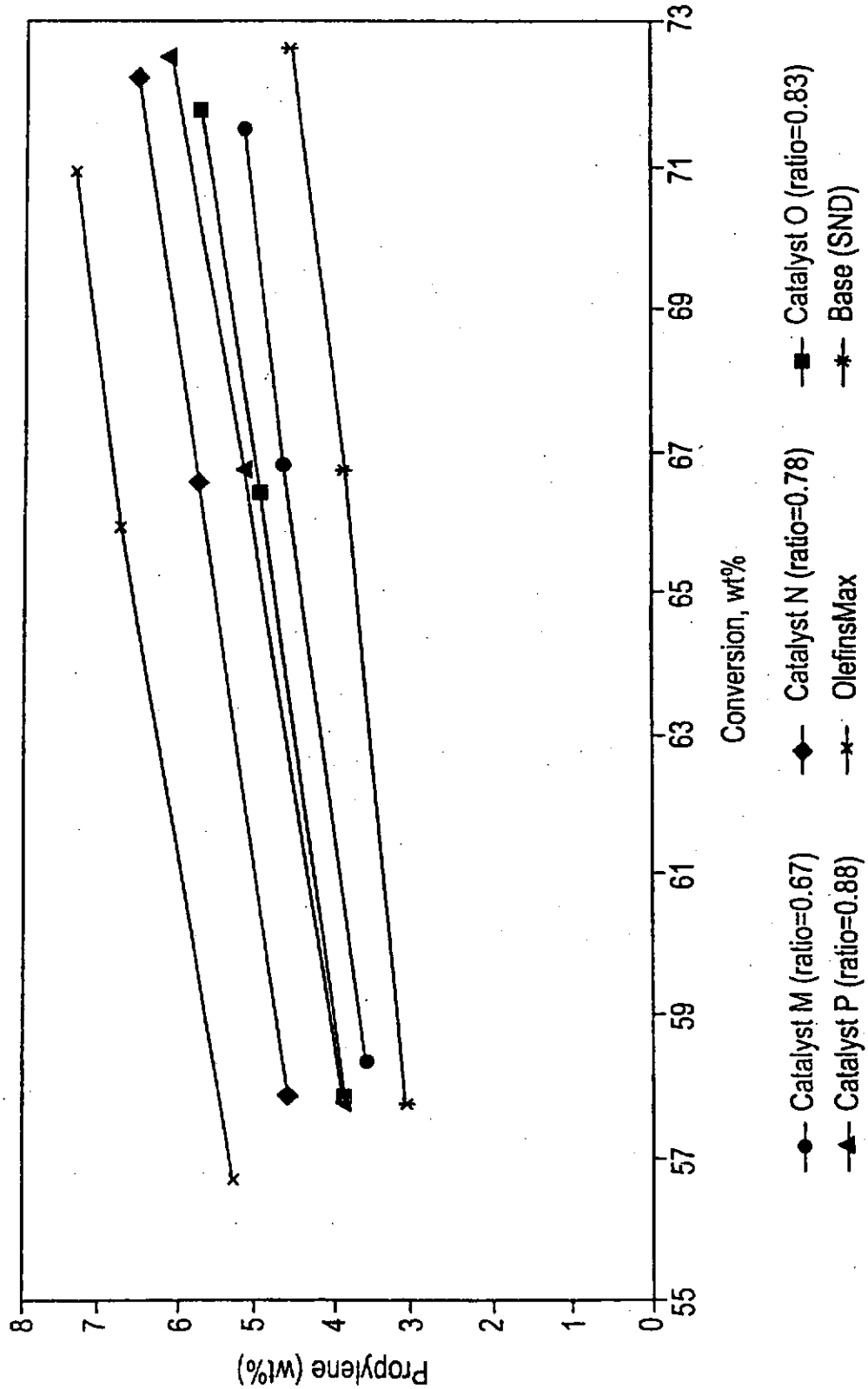

Propylene (wt%)
0
1
2
3
4
5
6
7
8
55
57
59
61
63
65
67
69
71
73
Conversion, wt%
Catalyst M (ratio=0.67)
Catalyst N (ratio=0.78)
Catalyst O (ratio=0.83)
Catalyst P (ratio=0.88)
OlefinsMax
Base (SND)

FIG. 9

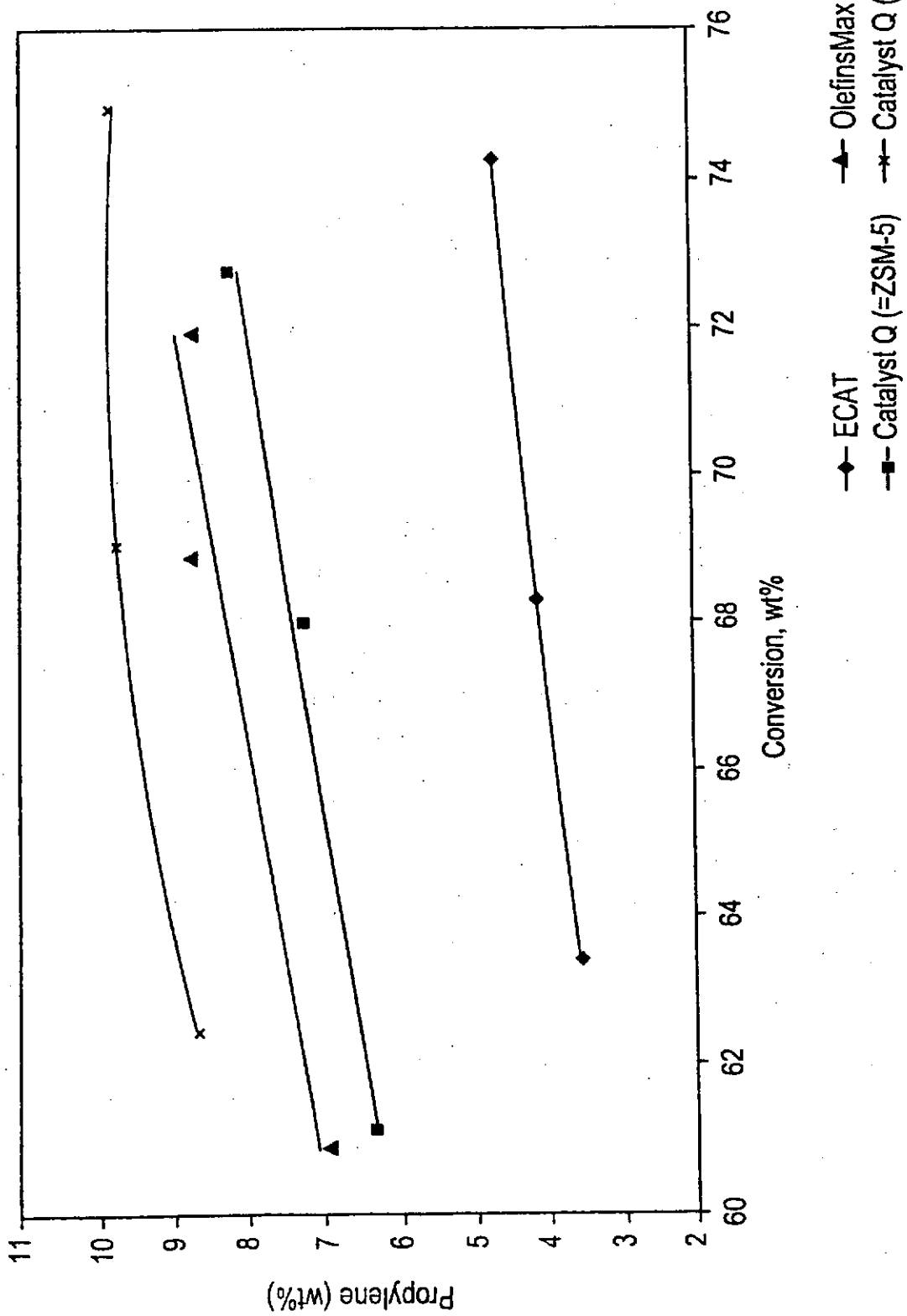
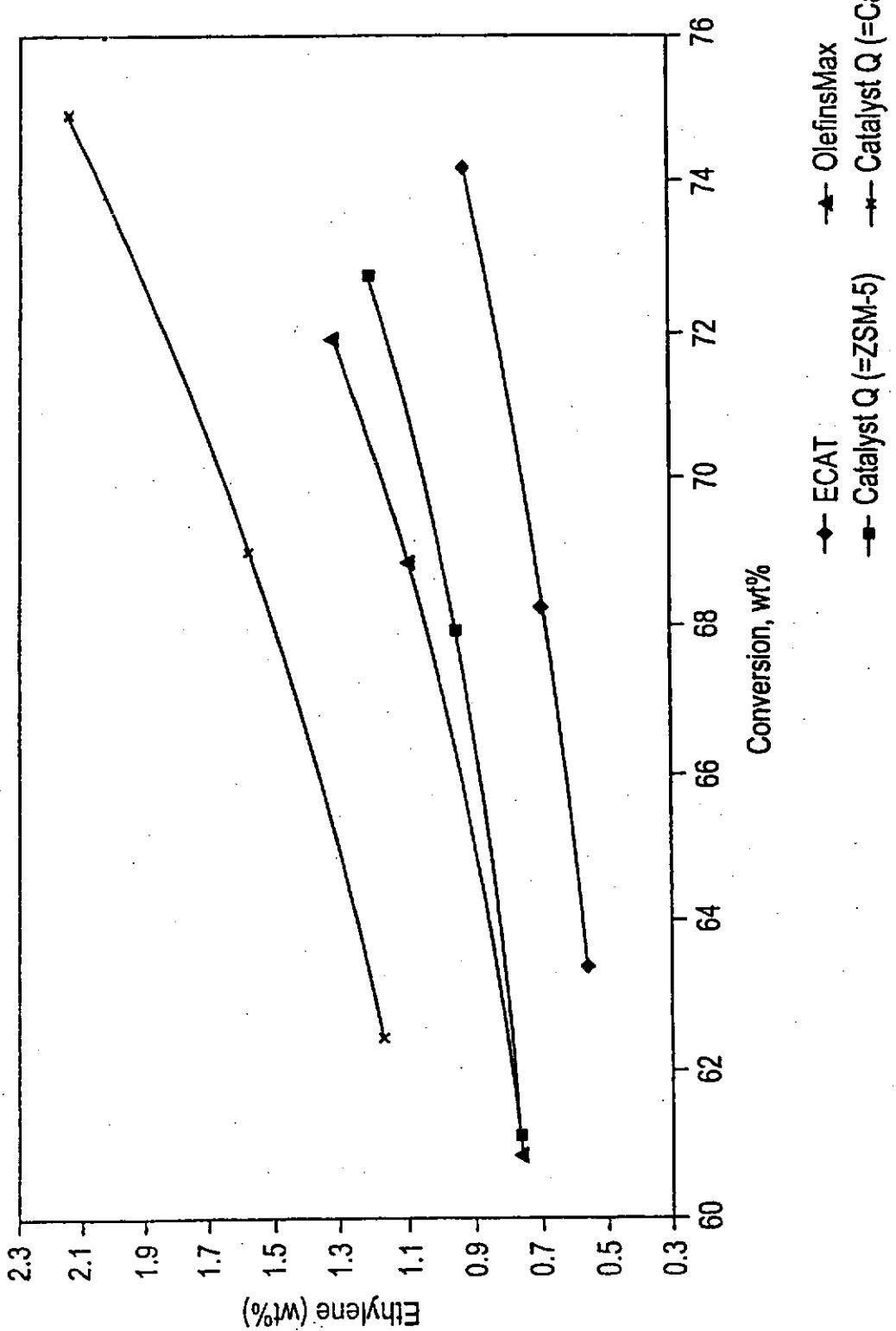

Propylene (wt%)
Conversion, wt%
ECAT
OlefinsMax
Catalyst Q (=ZSM-5)
Catalyst Q (=Cat)

FIG. 10


Ethylene (wt%)
2.3
2.1
1.9
1.7
1.5
1.3
1.1
0.9
0.7
0.5
0.3
60
62
64
66
68
70
72
74
76
Conversion, wt%
ECAT
Catalyst Q (=ZSM-5)
OlefinsMax
Catalyst Q (=Cat)