

Supporting Information

Enantioselective Hydrogenation of α -Ketoesters Over Alkaloid-Modified Platinum Nanowires**

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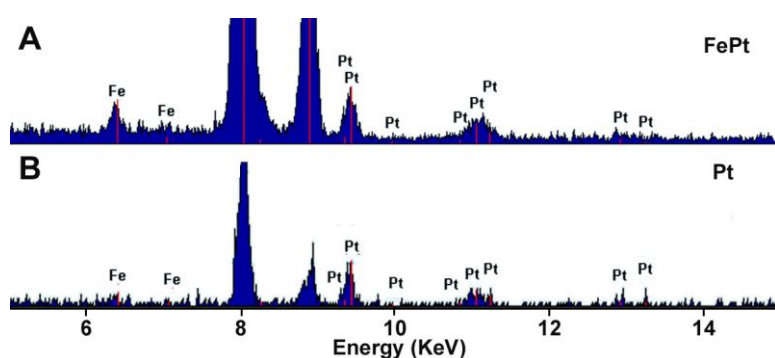


Fig. S1 EDX analyses of (A) FePt and (B) Pt nanowires with Fe/Pt weight ratios of (A) 52:48 and (B) 5:95.

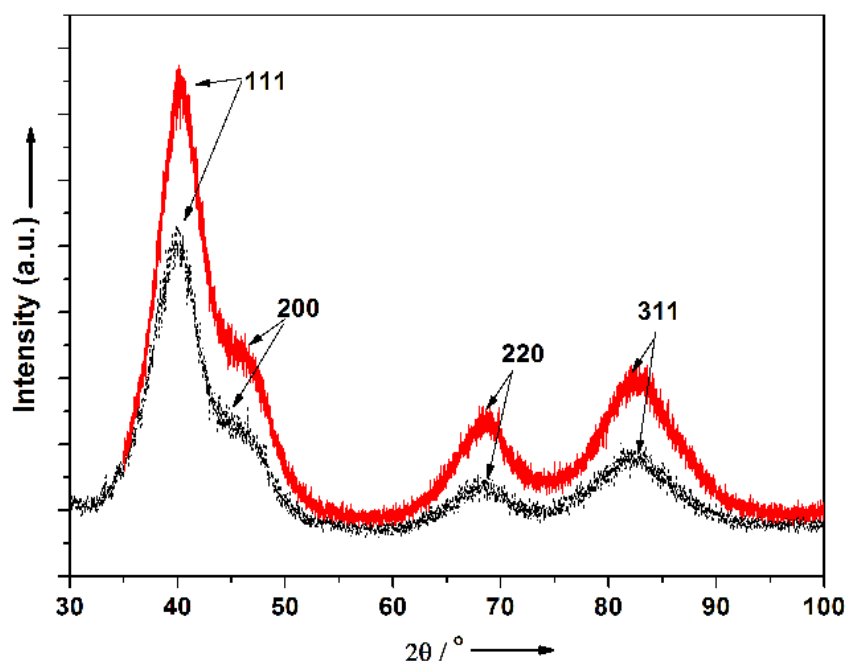


Fig. S2 XRD patterns of the as-synthesized (—) FePt and (---) Pt nanowires.

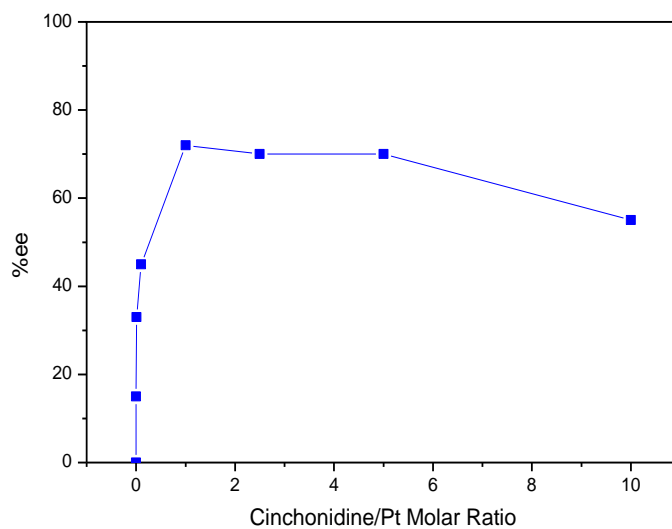


Fig. S3 Effect of alkaloid/Pt molar ratio on the enantioselectivity of asymmetric hydrogenation of ethyl pyruvate in water and acetic acid at 25°C over 1 mol% of Pt nanowires.

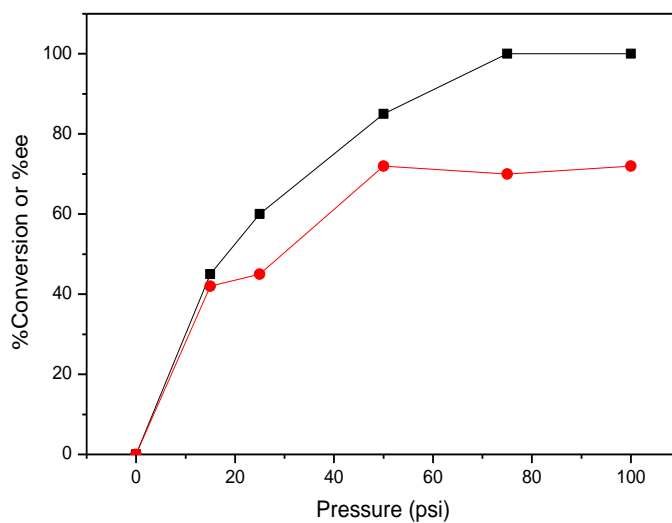


Fig. S4 Effect of pressure on the (■) conversion and (●) ee of asymmetric hydrogenation of ethyl pyruvate in water and acetic acid at 25°C over 1 mol% of Pt nanowires.



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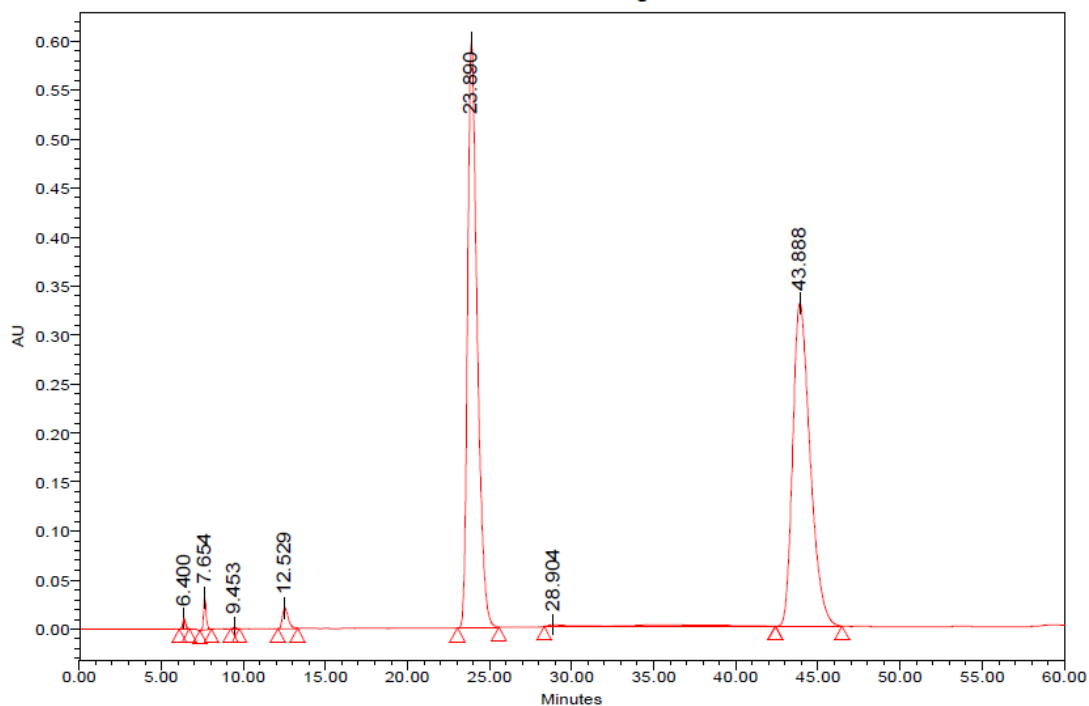
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Project Name: NandanPFUcatalyst

SAMPLE INFORMATION

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Vial:	1	Acq. Method Set:	
Injection #:	1	Date Processed:	6/12/2009 9:27:54 AM
Injection Volume:	10.00 ul	Processing Method:	Default
Run Time:	60.0 Minutes	Channel Name:	W2996 215.0nm-1.2
Sample Set Name:	June102009	Proc. Chnl. Descr.:	W2996 PDA 215.0 nm at 1.2

Auto-Scaled Chromatogram



SampleName 5NEBF-Rac; Vial 1; Injection 1; Channel W2996 215.0nm-1.2; Date Acquired 6/10/2009 11:09:49 AM

	RT	Area	% Area
1	23.890	24420064	48.32
2	43.888	24328067	48.14

Fig. S5 HPLC profile of racemic ethyl mandelate.



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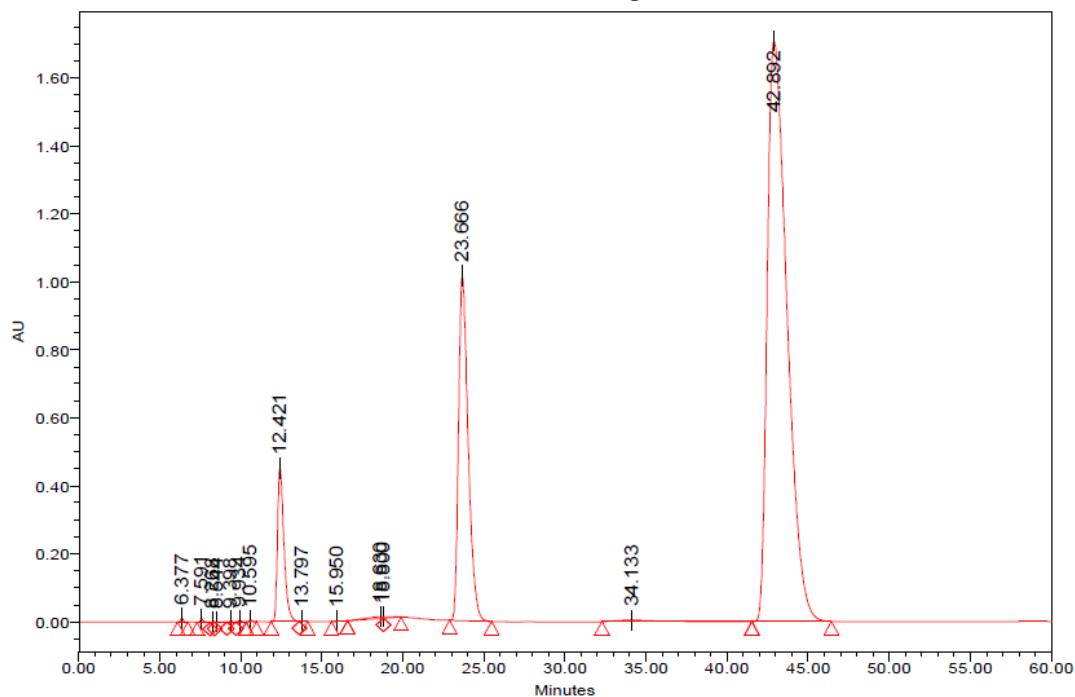
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Project Name: NandanPFUcatalyst

SAMPLE INFORMATION

Sample Name:	5NEBF-Rn1	Acquired By:	System
Sample Type:	Unknown	Date Acquired:	6/10/2009 2:12:18 PM
Vial:	4	Acq. Method Set:	
Injection #:	1	Date Processed:	6/12/2009 9:28:12 AM
Injection Volume:	10.00 ul	Processing Method:	Default
Run Time:	60.0 Minutes	Channel Name:	W2996 215.0nm-1.2
Sample Set Name:	June102009	Proc. Chnl. Descr.:	W2996 PDA 215.0 nm at 1.2

Auto-Scaled Chromatogram



— SampleName 5NEBF-Rn1; Vial 4; Injection 1; Channel W2996 215.0nm-1.2; Date Acquired 6/10/2009 2:12:18 PM

	RT	Area	% Area
1	23.666	41752840	20.87
2	42.892	143948801	71.94

Fig. S6 HPLC profile of hydrogenation of ethylbenzoyl formate in the presence of cinchonidine.



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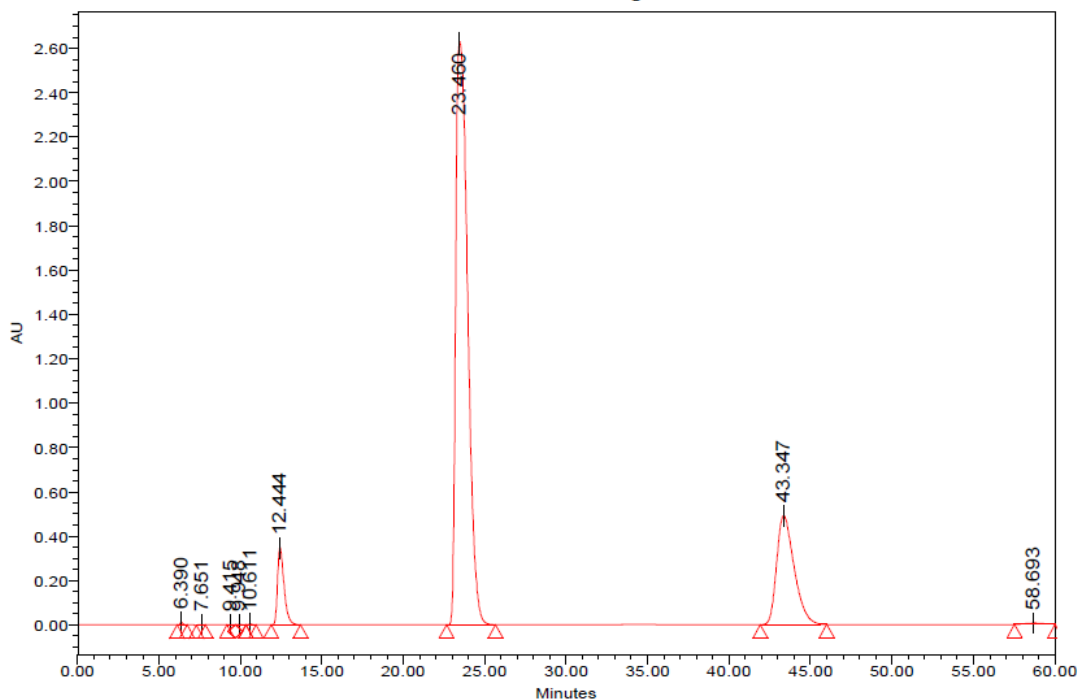
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SAMPLE INFORMATION

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Injection Volume:	10.00 ul	Processing Method:	Default
Run Time:	60.0 Minutes	Channel Name:	W2996 215.0nm-1.2
Sample Set Name:	June102009	Proc. Chnl. Descr.:	W2996 PDA 215.0 nm at 1.2

Auto-Scaled Chromatogram



SampleName 5NEBF-Rn2; Vial 5; Injection 1; Channel W2996 215.0nm-1.2; Date Acquired 6/10/2009 3:13:08 PM

	RT	Area	% Area
1	23.460	133194379	73.98
2	43.347	36587800	20.32

Fig. S7 HPLC profile of hydrogenation of ethylbenzoyl formate in the presence of cinchonine.

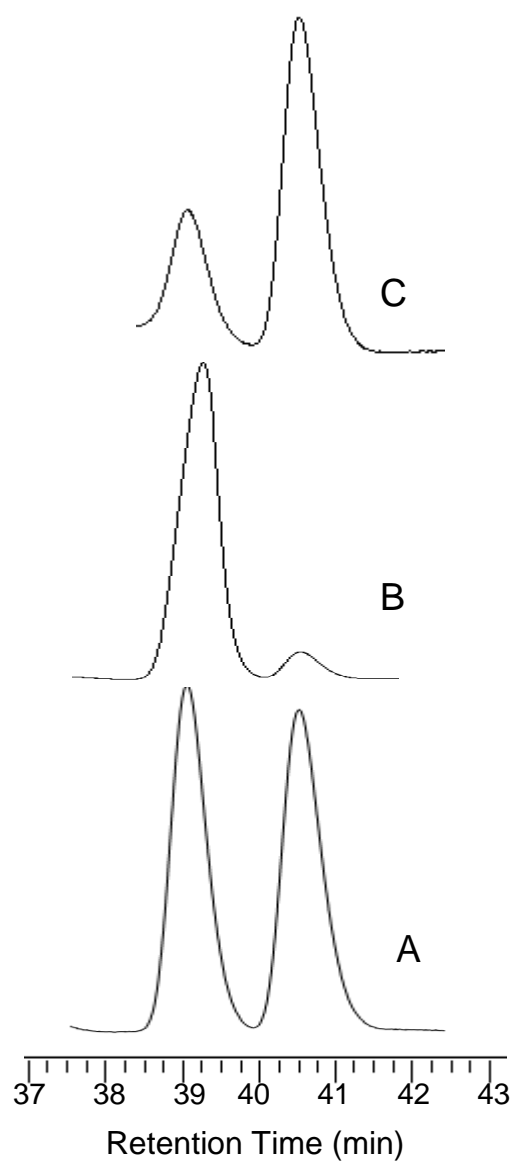


Fig. S8 HPLC profiles of the products of asymmetric hydrogenation of ethyl pyruvate: (A) racemic ethyl lactate, (B) *R*-ethyl lactate, and (C) *S*-ethyl lactate.