

WHAT IS CLAIMED IS:

1. A process for selectively producing hydrocracked n-paraffins from heavy n-paraffins comprising contacting a hydrocarbon feed comprising heavy n-paraffins with a hydrocracking catalyst comprising an unsulfided low acidity noble-metal containing zeolite under hydrocracking conditions to produce a hydrocarbon product comprising hydrocracked n-paraffins.
2. The process of claim 1, wherein the zeolite is an aluminosilicate.
3. The process of claim 1, wherein the zeolite is an aluminosilicate having a low alumina content and/or a high silica-to-alumina ratio.
4. The process of claim 2, wherein the zeolite silica-to-alumina ratio is of a sufficient value or range to selectively produce n-paraffin cracking products, preferably n-paraffin products over isoparaffin products.
5. The process of claim 2, wherein the zeolite silica-to-alumina ratio is at least about 70, or 80, or 90, or 100, or 110, or 120.
6. The process of claim 1, wherein the zeolite is an aluminosilicate that does not contain boron or is not a borosilicate or aluminoborosilicate, or is other than a borosilicate or aluminoborosilicate.
7. The process of claim 1, wherein the zeolite is an aluminosilicate zeolite hydrocracking catalyst selected from USY, Beta, ZSM-4, ZSM-12, ZSM-18, ZSM-20, Y, L or a combination thereof.
8. The process of claim 7, wherein the zeolite is selected from USY and ZSM-12, or a combination thereof.
9. The process of claim 1, wherein the heavy n-paraffins comprise C₁₂₊ n-paraffins, or are predominantly C₁₂₊ n-paraffins, or wherein the C₁₂₊ content is greater than about 50 wt%, or 60, or 70, or 80, or 90, or 95, or 98, or is about 100%.
10. The process of claim 1, wherein the noble metal comprises platinum.
11. The process of claim 1, wherein the hydrocracking conditions comprise a temperature of about 270°C to about 330°C, a pressure in the range of about 200 psig to about 2000 psig and a space velocity in the range of about 0.4 to about 2.0 LHSV hr⁻¹.
12. The process of claim 1, wherein the fractional yield of hydrocracked n-paraffin product is at least about 10 mol% greater than a corresponding fractional yield obtained using a hydrocracking catalyst that differs only in having a zeolite silica-to-alumina ratio that is no greater than about 60.
13. The process of claim 12, wherein the fractional yield of hydrocracked n-paraffin product is at least about 20, or 30, or 40, or 50, or 60, or 70, or 80, or 90, or 100 mol% greater.

14. Use of an unsulfided low acidity noble-metal containing zeolite for selectively producing hydrocracked n-paraffins from heavy n-paraffins in accordance with the process of claim 1.
15. Use of an unsulfided low acidity noble-metal containing zeolite according to claim 14, wherein the zeolite is an aluminosilicate zeolite hydrocracking catalyst selected from USY, Beta, ZSM-4, ZSM-12, ZSM-18, ZSM-20, Y, L or a combination thereof.
16. Use of an unsulfided low acidity noble-metal containing zeolite according to claim 14, wherein the zeolite is an aluminosilicate zeolite hydrocracking catalyst selected from USY and ZSM-12, or a combination thereof.
17. A hydrocracked n-paraffin composition produced in accordance with the process of claim 1.