

عنوان مقاله:

Different surface precipitation scenarios in Iranian cude oils

محل انتشار:

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خلاصه مقاله:

In the present study, bi-fractal and its formalism were employed to investigate the surface characteristics of different asphaltene deposited heterogeneous solid surface. The topography information of the surfaces was obtained by two image analyses, AFM (atomic force microscopy) and SEM (scanning electron microscopy) imaging techniques. A bi-fractal approach can reveal surface roughness features for two regions macro- and micro-asperities, namely, surface types land II, respectively. The observed variation of the fractal dimension in the two surface types could be considered as the consequence of different asphaltene sources (three asphaltene sources: Gachsaran, Kuh-e-Mond, and Bangestan oil). Therefore, the structure of different asphaltene sources was carefully examined. Results indicate that at higher pressure, surface type II in asphaltene of Kuh-e-Mond dissolves and asphaltene particles with larger chromophore (polyaromatic fused ring system) tend to be detached easier at higher pressure than those with smaller poly-aromatic rings

کلمات کلیدی:

Precipitation, Bi-fractal, Surface roughness, Asphaltene, Oil

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