

Electron Paramagnetic Resonance Study of the Fractions and Trapped Compounds in Asphaltenes of Merey Heavy Crude Oils and Its Vacuum Residue

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APPENDIX A

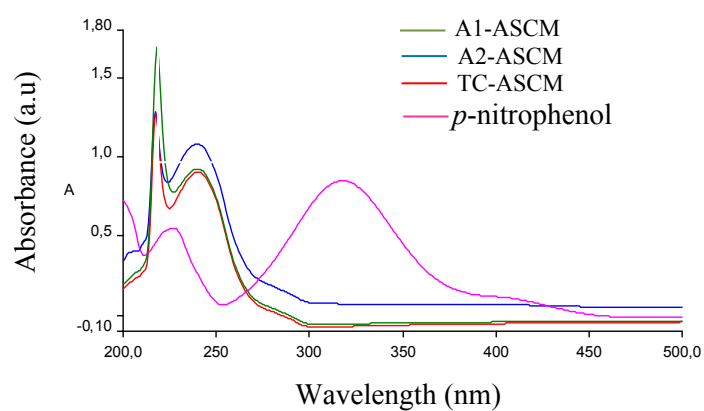


Figure A.1. UV-Visible spectra of A1 fraction, A2 fraction and trapped compounds from ASCM in the absence of *p*-nitrophenol.

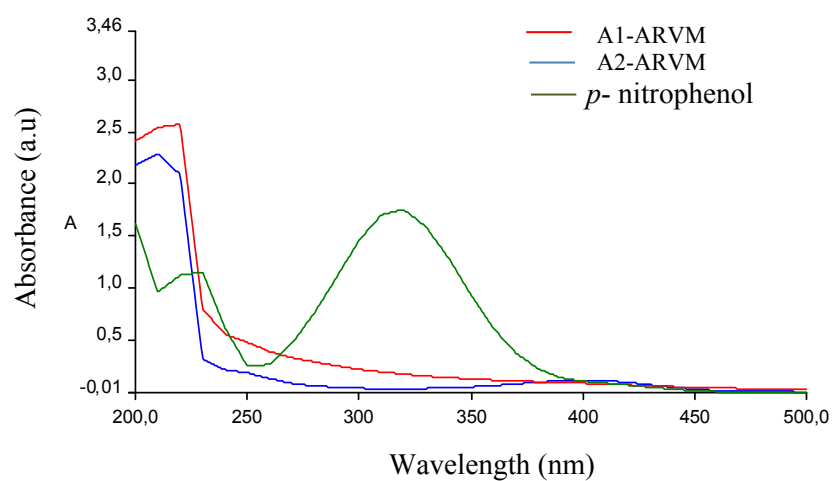
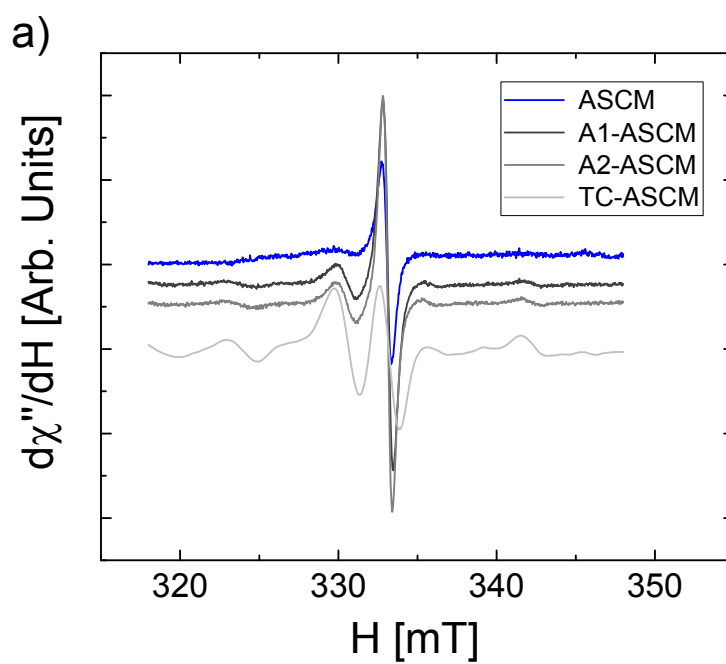


Figure A.2. UV-Visible spectra of A1 fraction and A2 fraction from ARVM in the absence of *p*-nitrophenol.



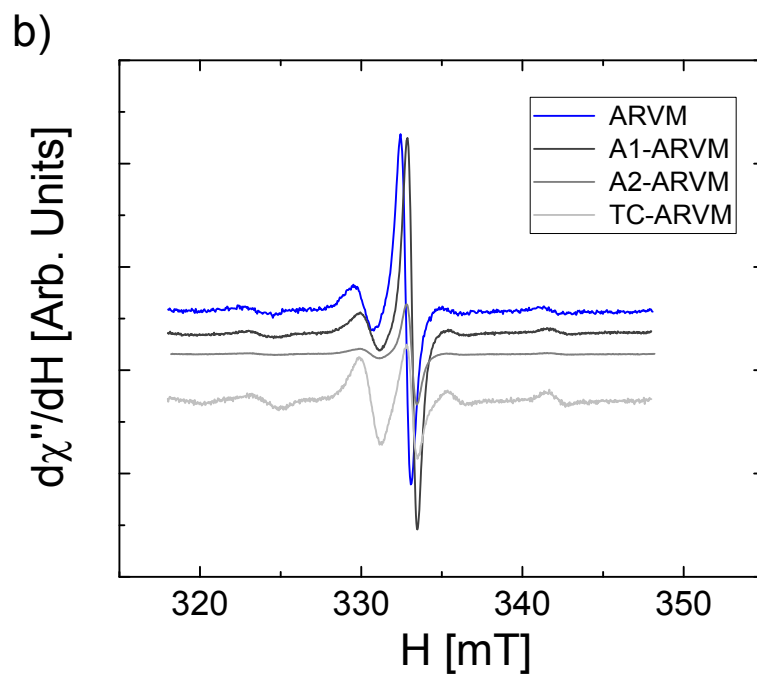
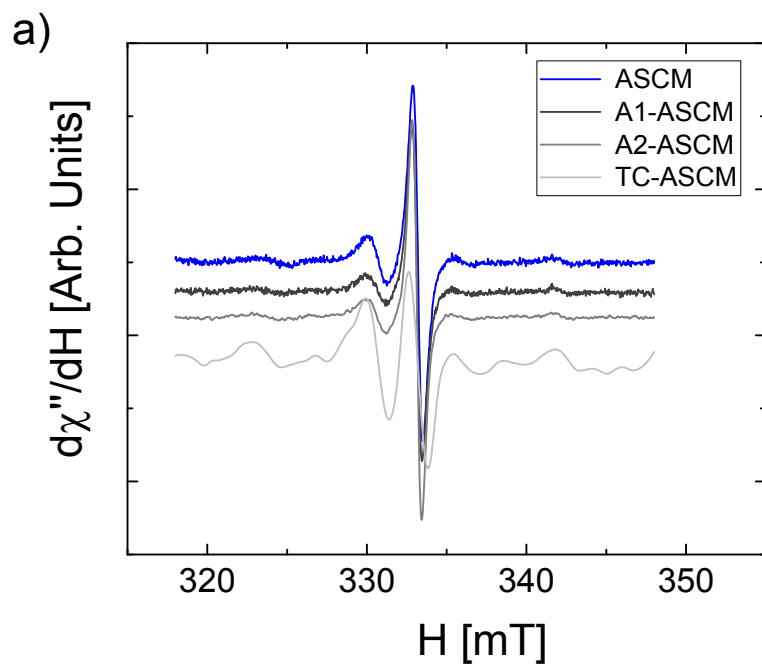


Figure A.3. EPR spectra of: (a) ASCM; A1-ASCM; A2-ASCM; TC-ASCM and (b) ARVM; A1-ARVM; A2-ARVM; TC-ARVM at 120 K.



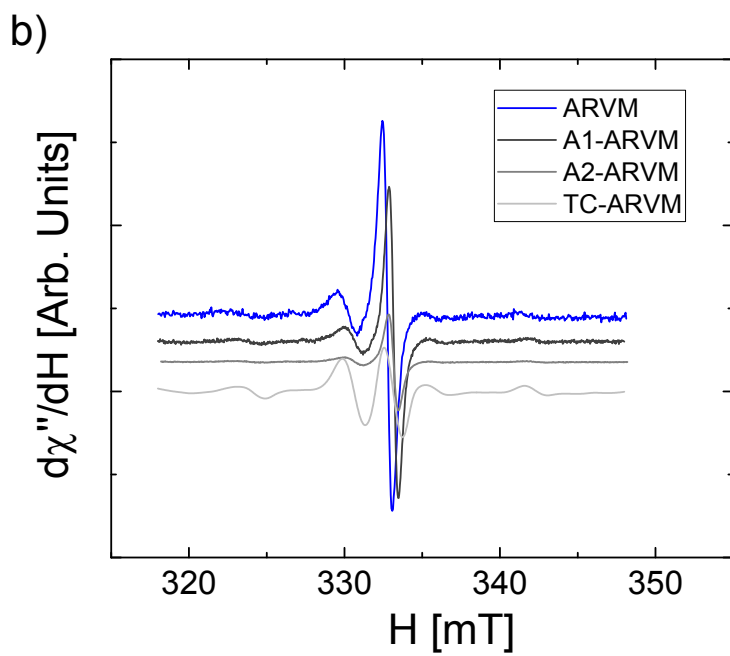
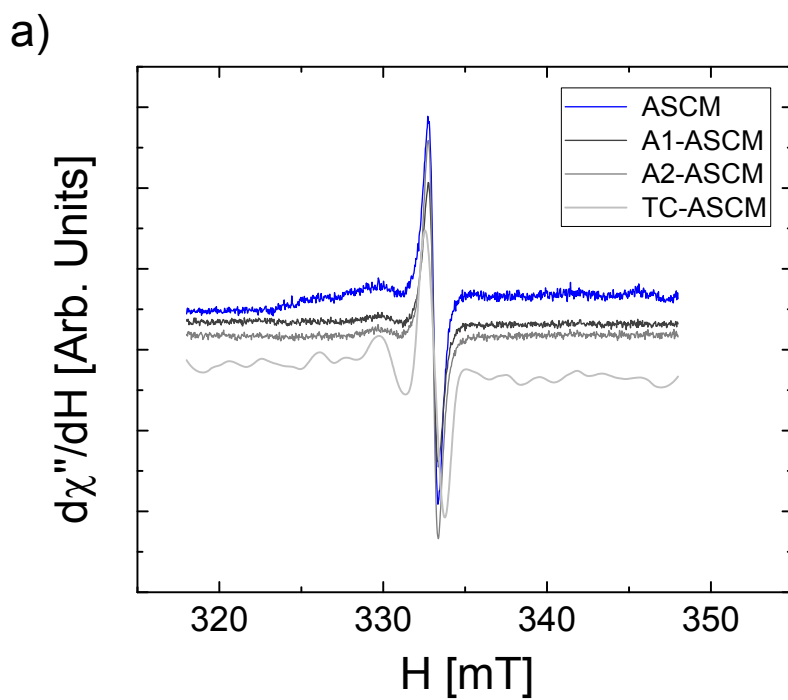


Figure A.4. EPR spectra of: (a) ASCM; A1-ASCM; A2-ASCM; TC-ASCM and (b) ARVM; A1-ARVM; A2-ARVM; TC-ARVM at 300 K.



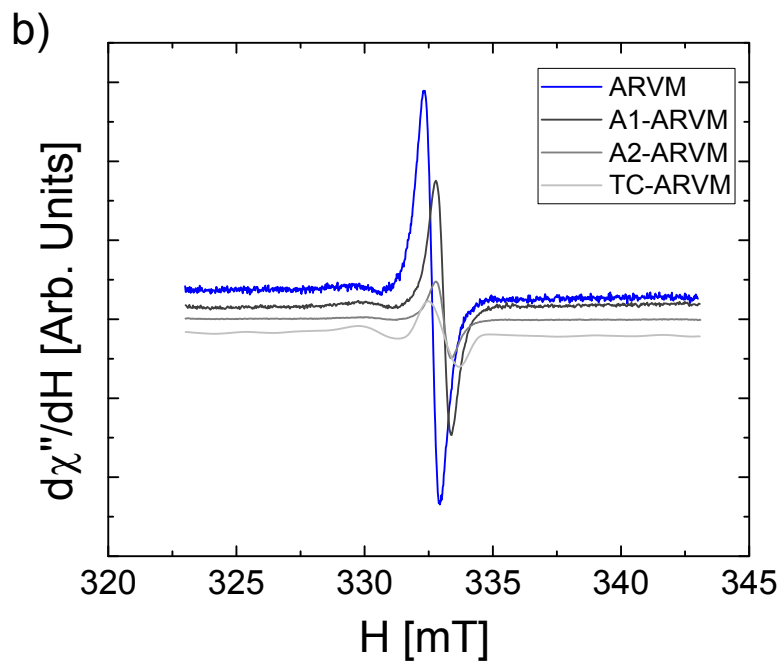
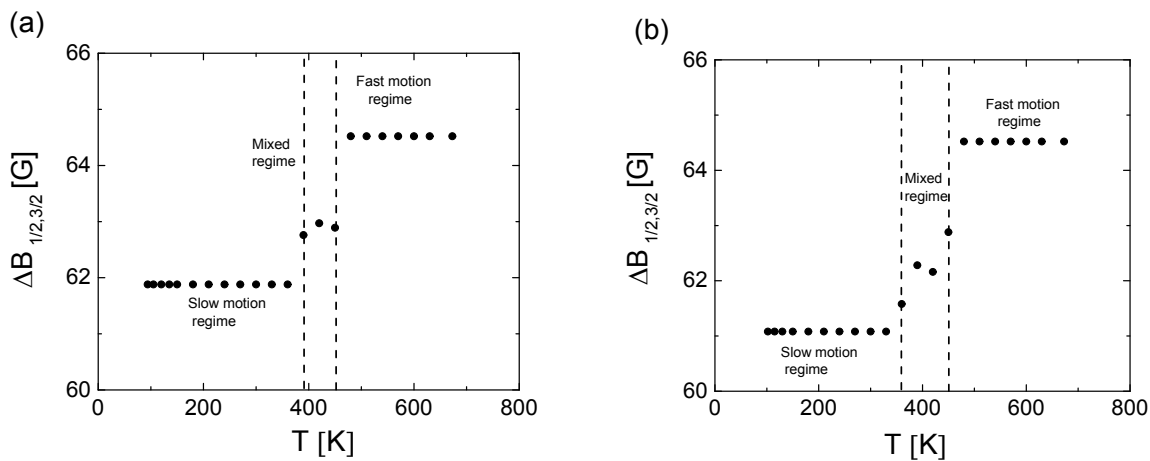


Figure A.5. EPR spectra of: (a) ASCM; A1-ASCM; A2-ASCM; TC-ASCM and (b) ARVM; A1-ARVM; A2-ARVM; TC-ARVM at 600 K.



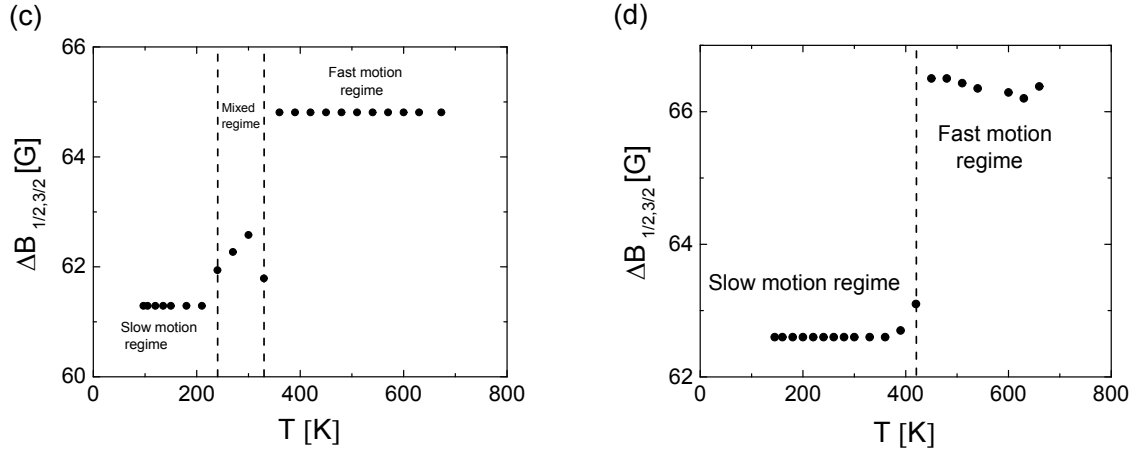


Figure A.6. Temperature dependencies of the experimental values of $\Delta B_{1/2,3/2}$ obtained for $m_l = \frac{1}{2}$ to $m_l = \frac{3}{2}$ transition in the EPR spectra of vanadium: a) A1-ARVM; b) A2-ARVM; c) TC-ARVM; d) ARVM.