

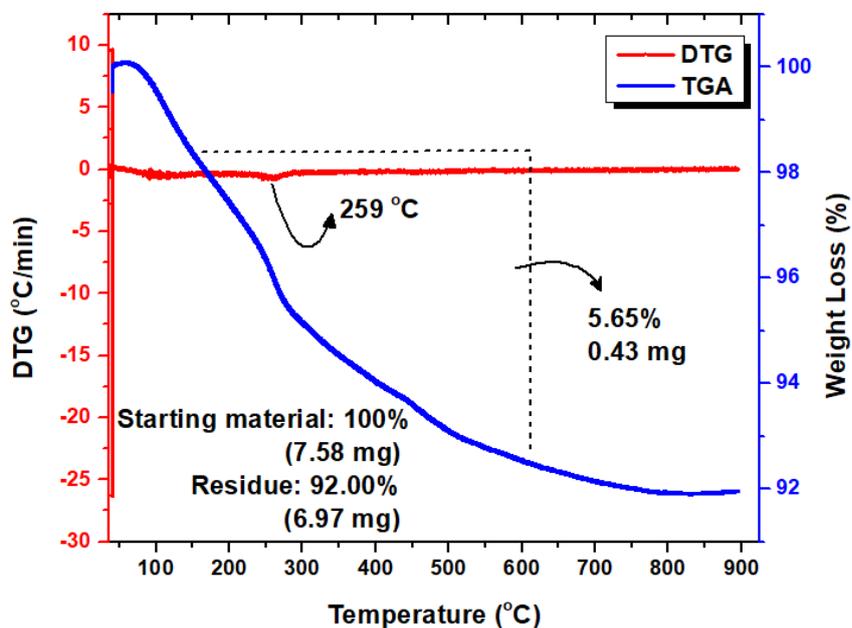
## Ionic magnetic core-shell nanoparticles for DNA extraction

Tammar Hussein Ali,<sup>1,2\*</sup> Amar Mousa Mandal<sup>3</sup>, Thorsten Heidelberg,<sup>1\*</sup> Rusnah Syahila Duali Hussen<sup>1</sup>, and Ean Wai Goh<sup>1</sup>

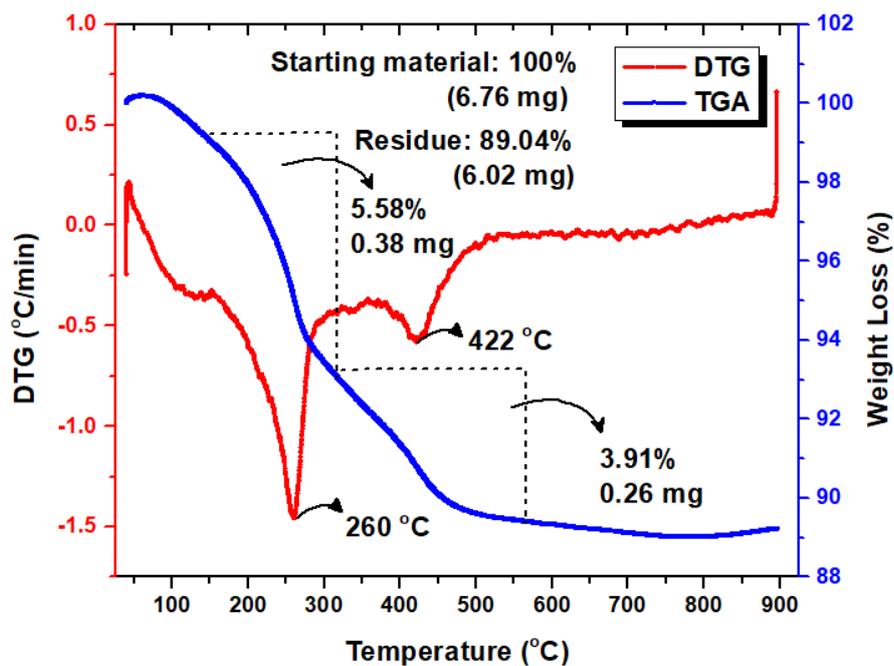
<sup>1</sup> Chemistry Department, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia

<sup>2</sup> Faculty of Pharmacy, Al-Muthanna University, 66001 Samawah, Al Muthanna. Iraq.

<sup>3</sup> College of Basic education, Science department, Al-Muthanna University, 66001 Samawah, Al Muthanna. Iraq.



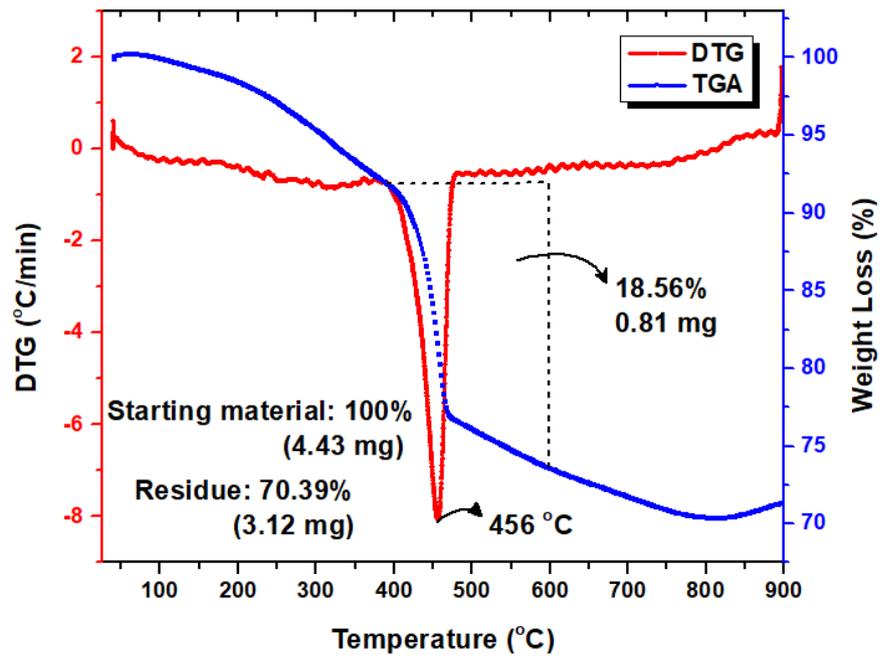
TG-DTA analysis of magnetic NpFeSi



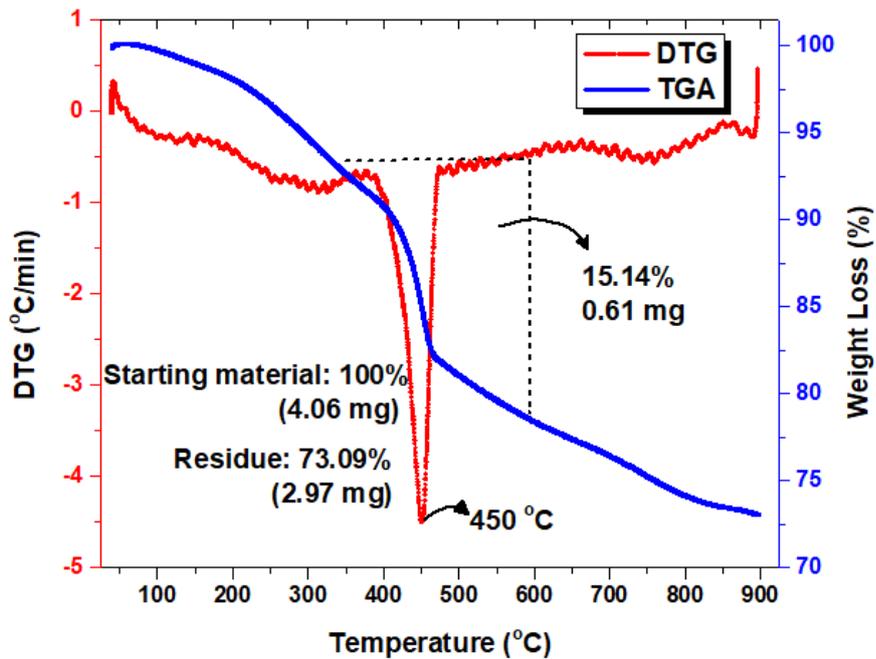
TG-DTA analysis of magnetic NpFeSiCl

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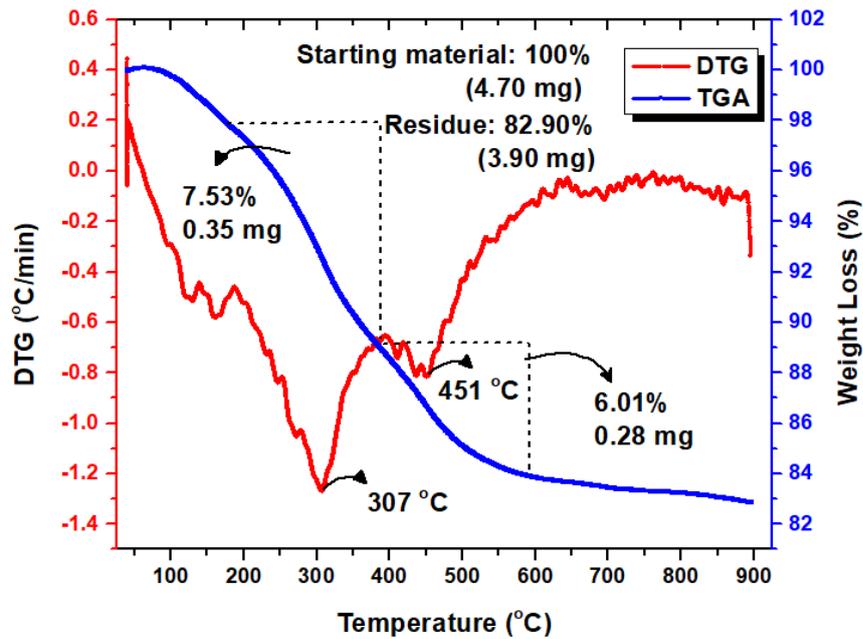
TG-DTA analysis of magnetic NpFeSi C12



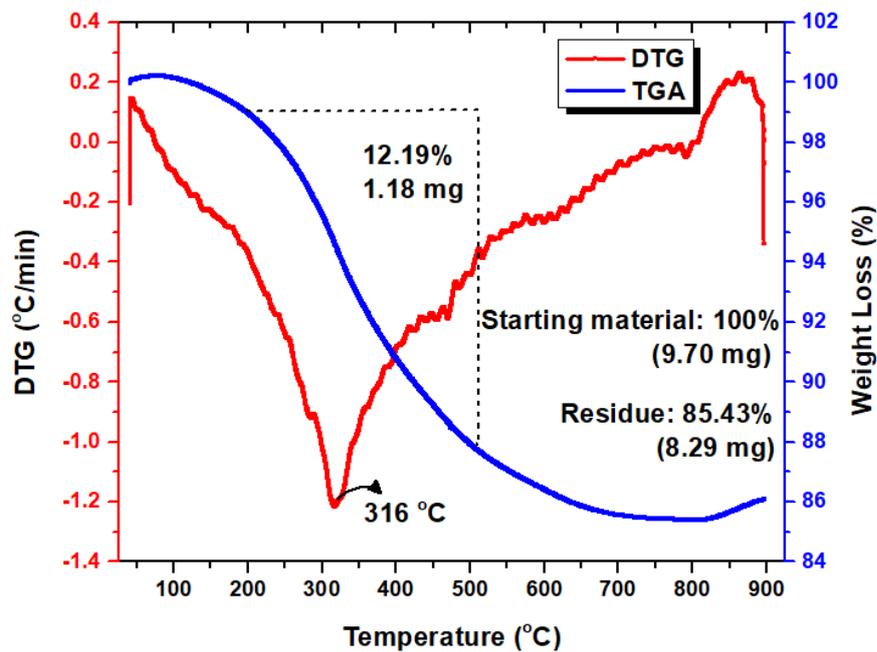
TG-DTA analysis of magnetic NpFeSi C10

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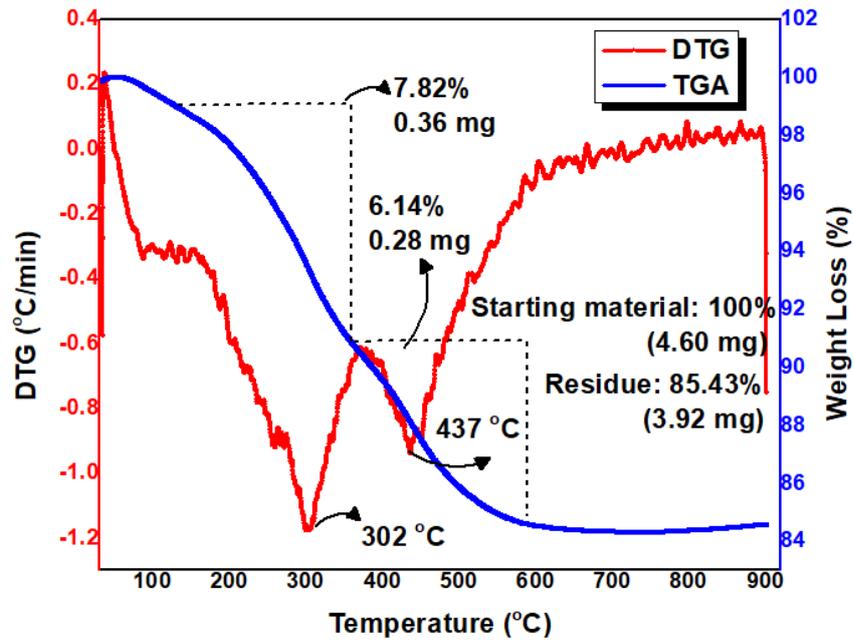
TG-DTA analysis of magnetic NpFeSi C8



TG-DTA analysis of magnetic NpFeSi C4:8

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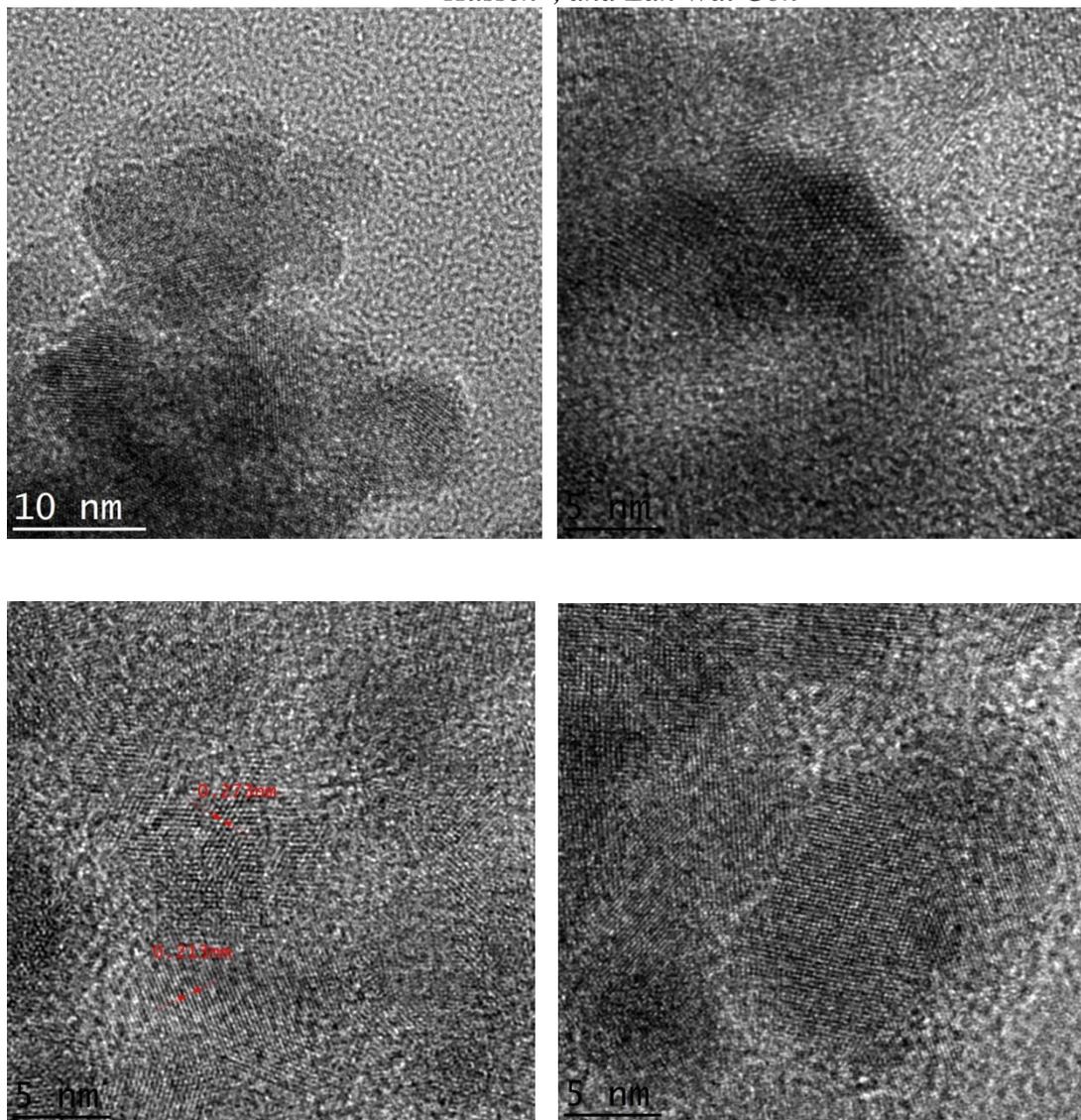
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TG-DTA analysis of magnetic NpFeSi C6:10

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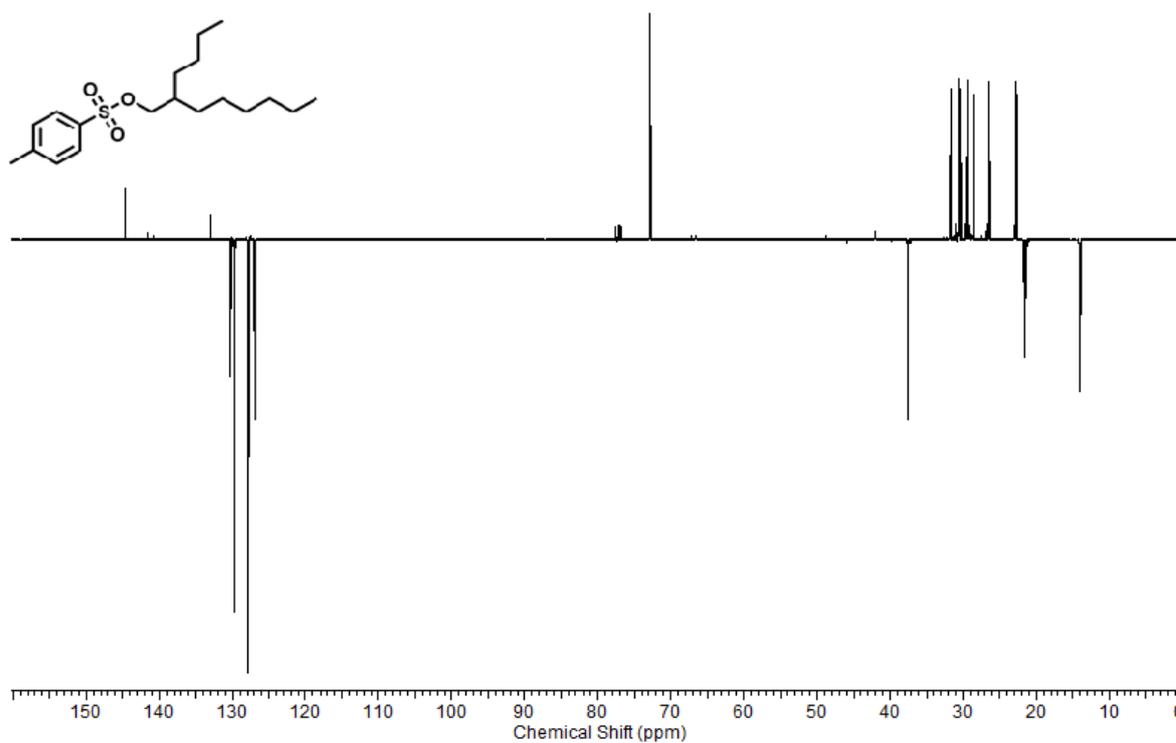
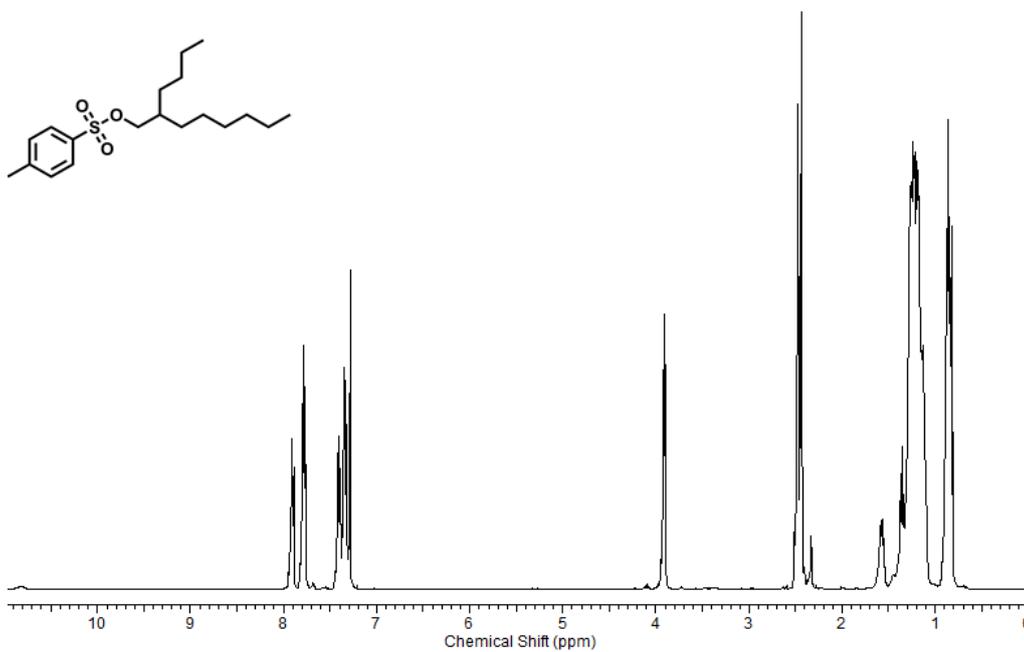
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Hussen<sup>1</sup>, and Ean Wai Goh<sup>1</sup>*



FESEM images of NpFeSiImR.

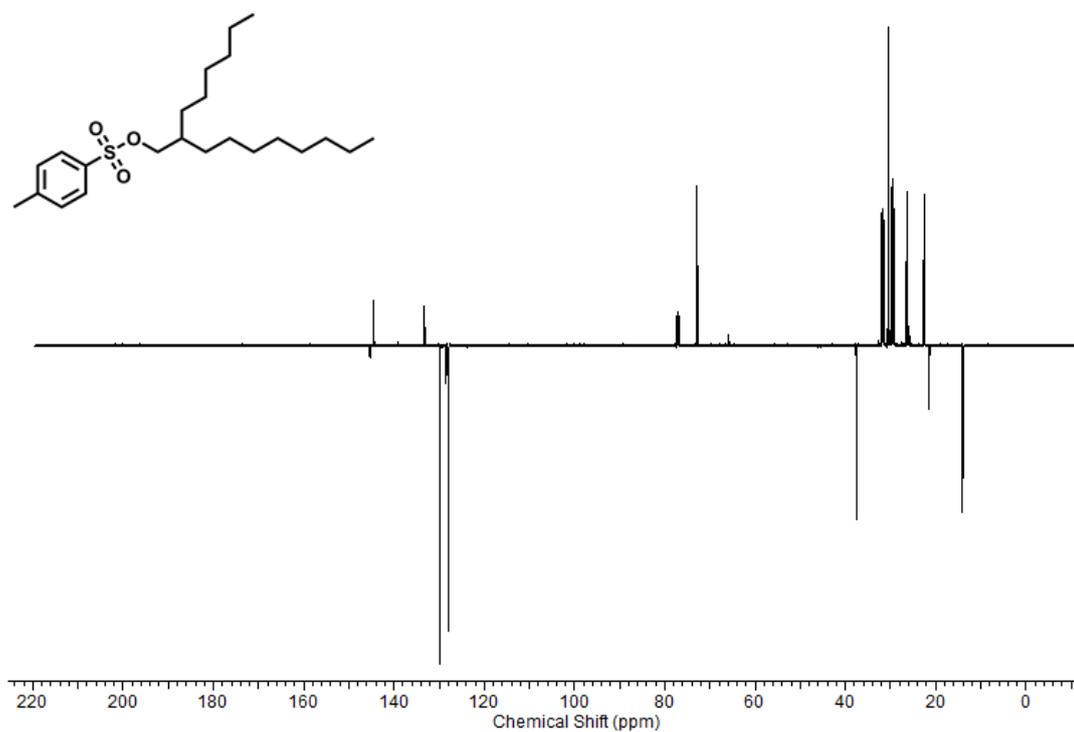
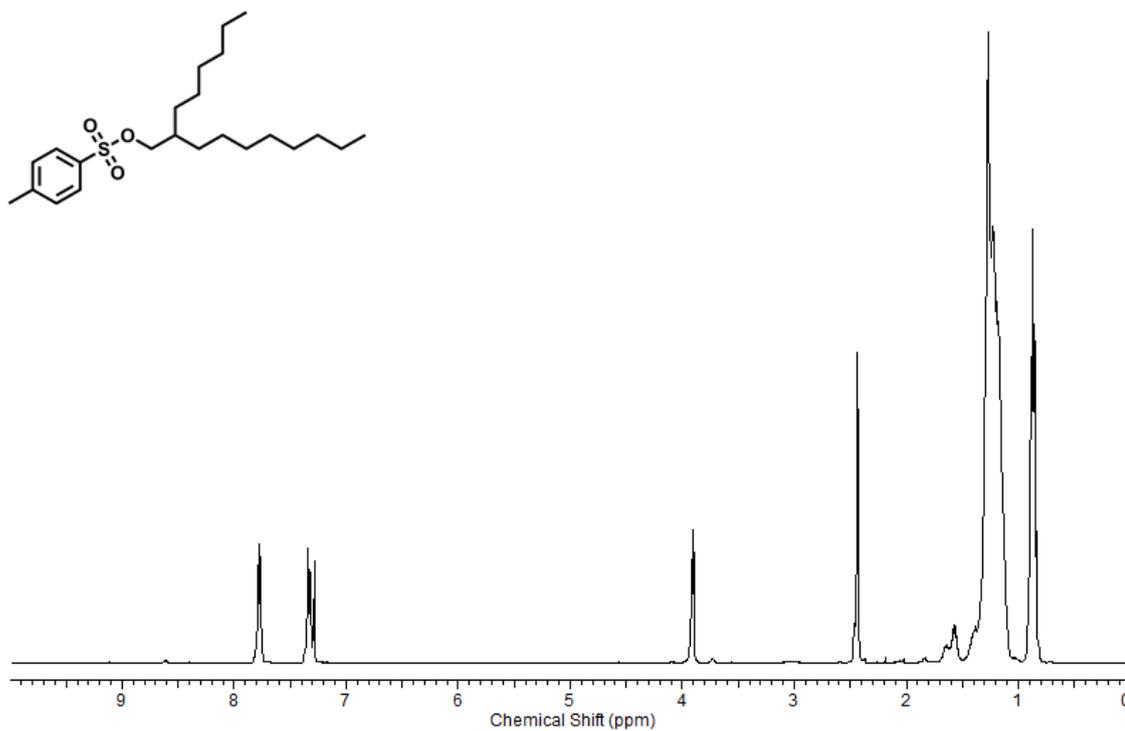
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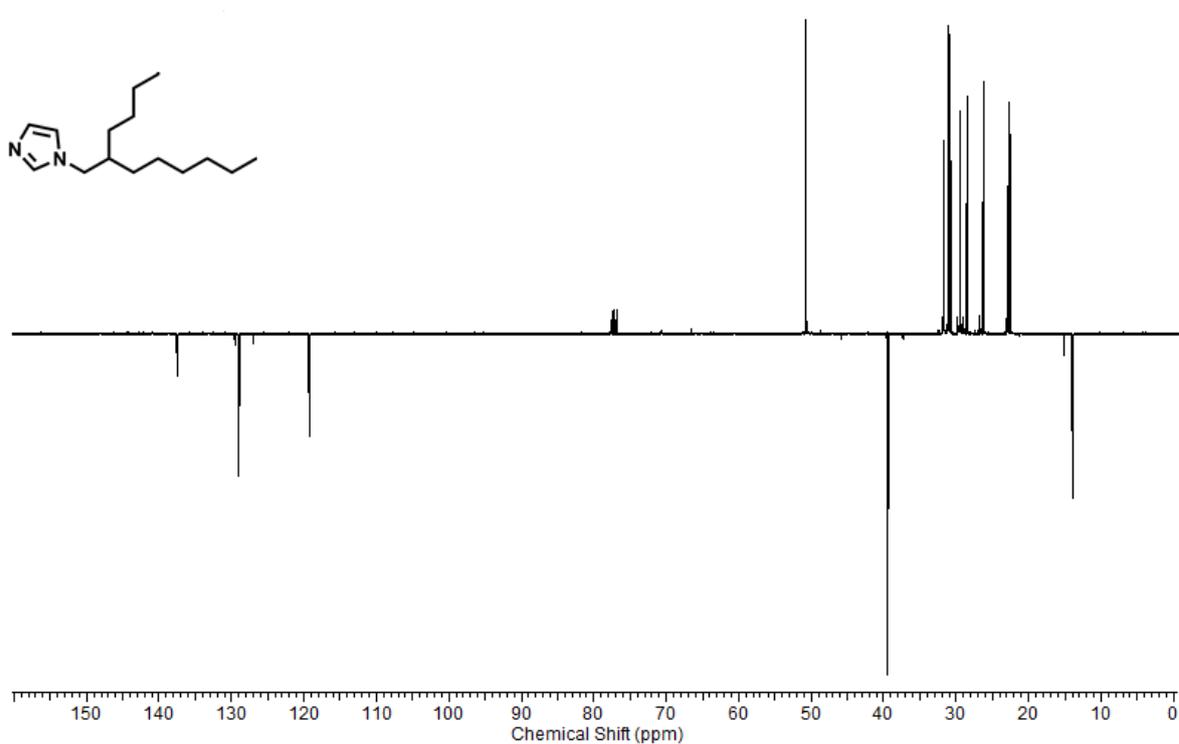
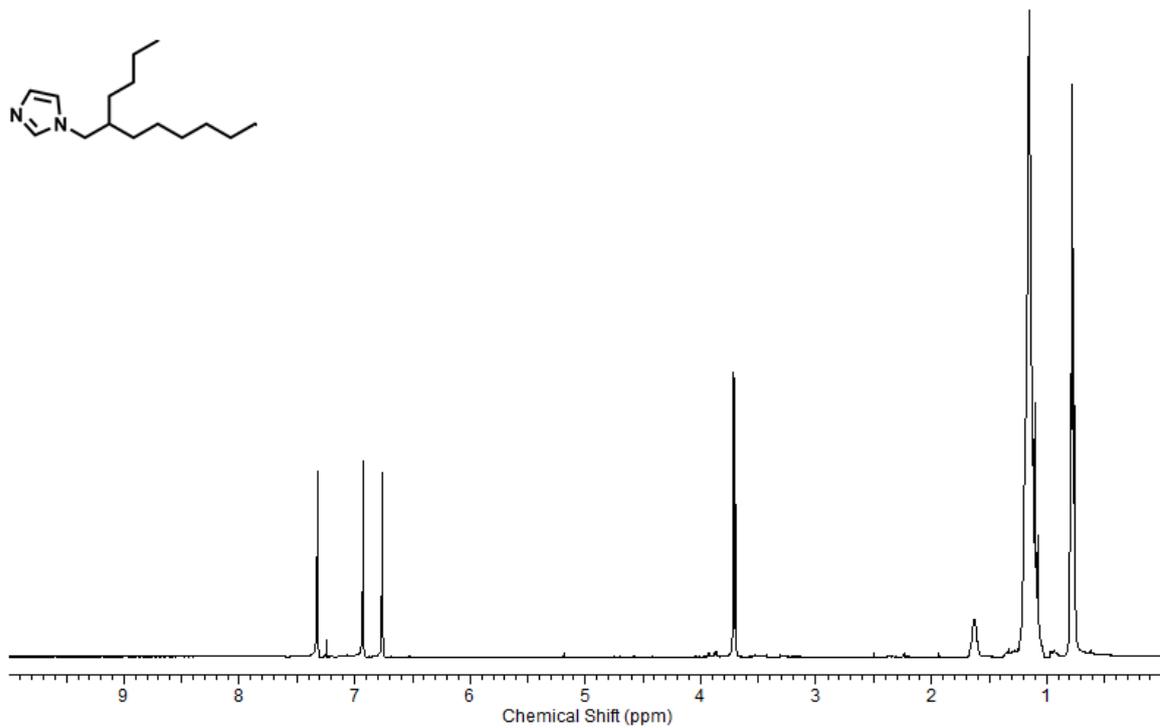
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