



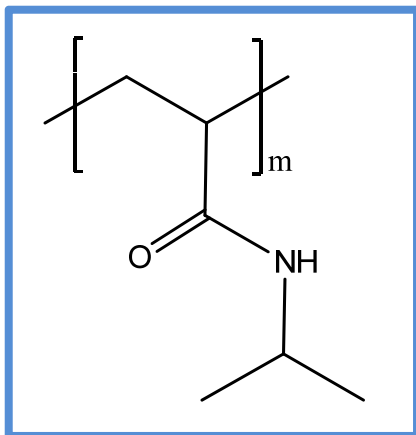
# **Synthesis and Characterization of Block Copolymer of PNIPAM and PEG prepared by ATRP**

**Bingqing Yang**

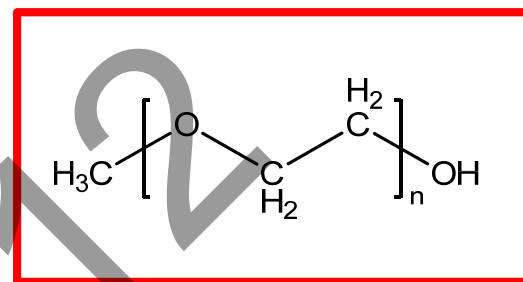
Supervisor: Prof. Jean Duhamel  
Chemistry, University of Waterloo

IPR Symposium  
May 2<sup>nd</sup>, 2012

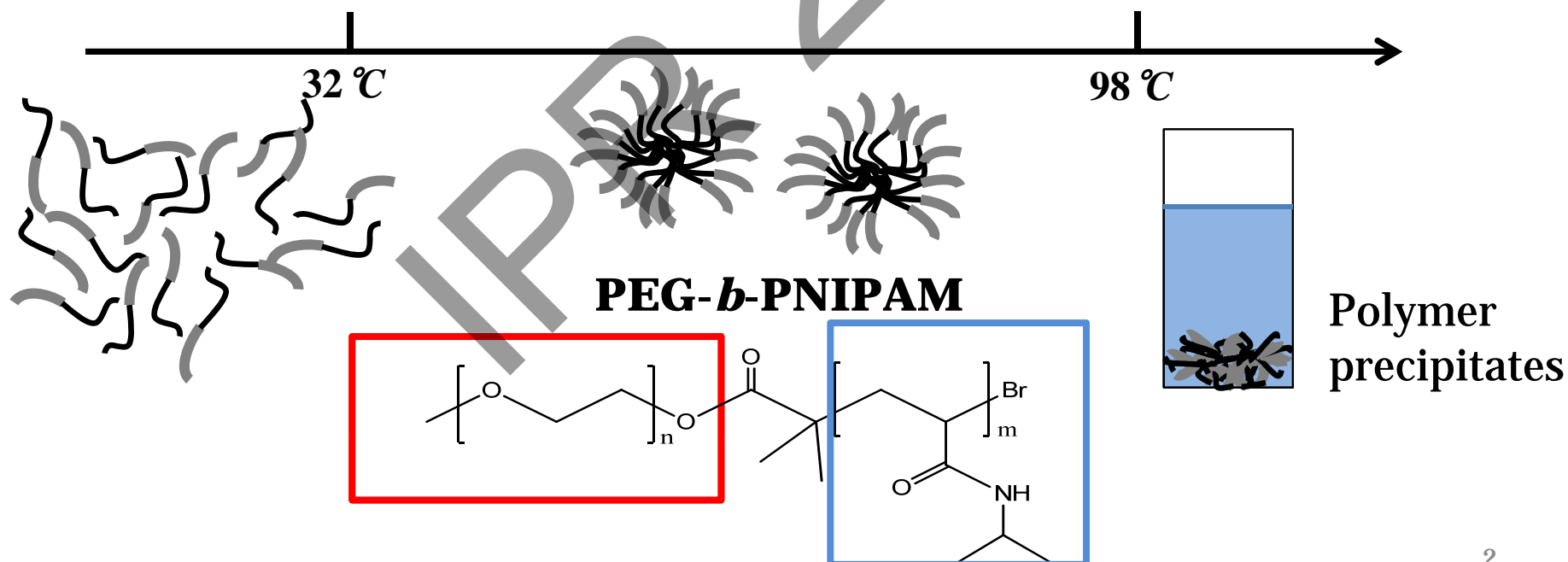
# Thermosensitive polymers



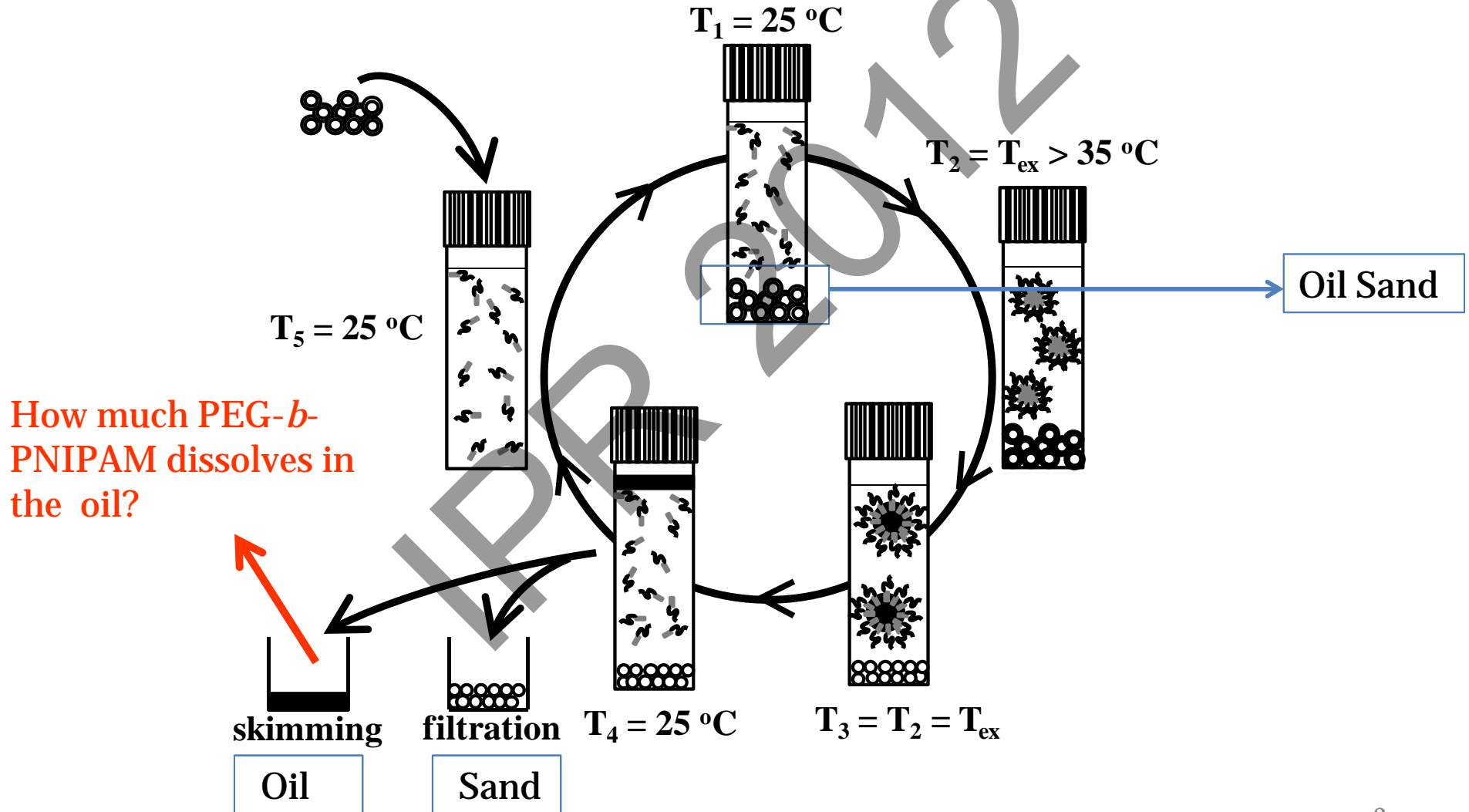
**Poly(*N*-isopropylacrylamide)  
(PNIPAM)**



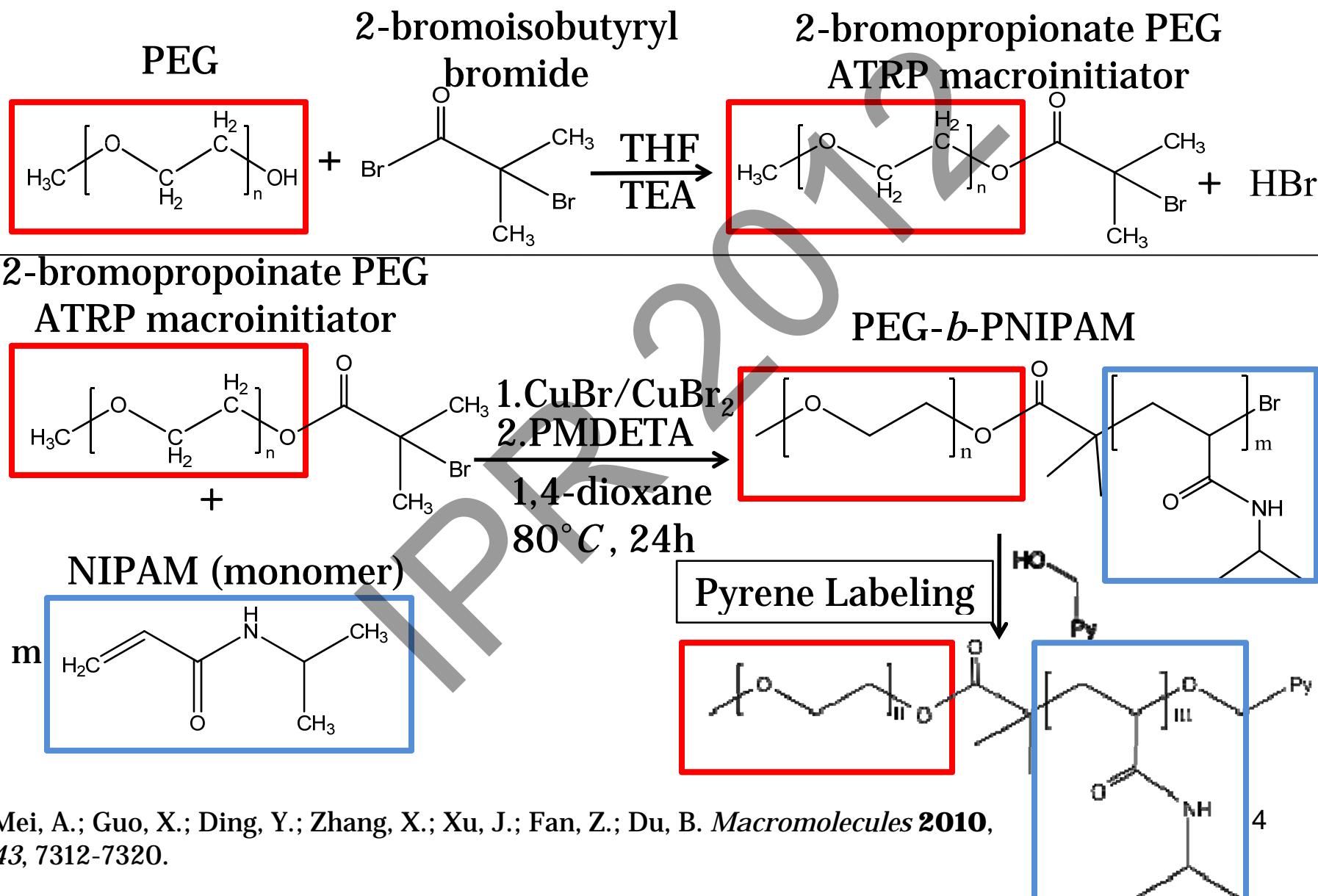
**Poly(ethylene glycol)  
(PEG)**



# Application: Extraction of Oil from Oil Sands



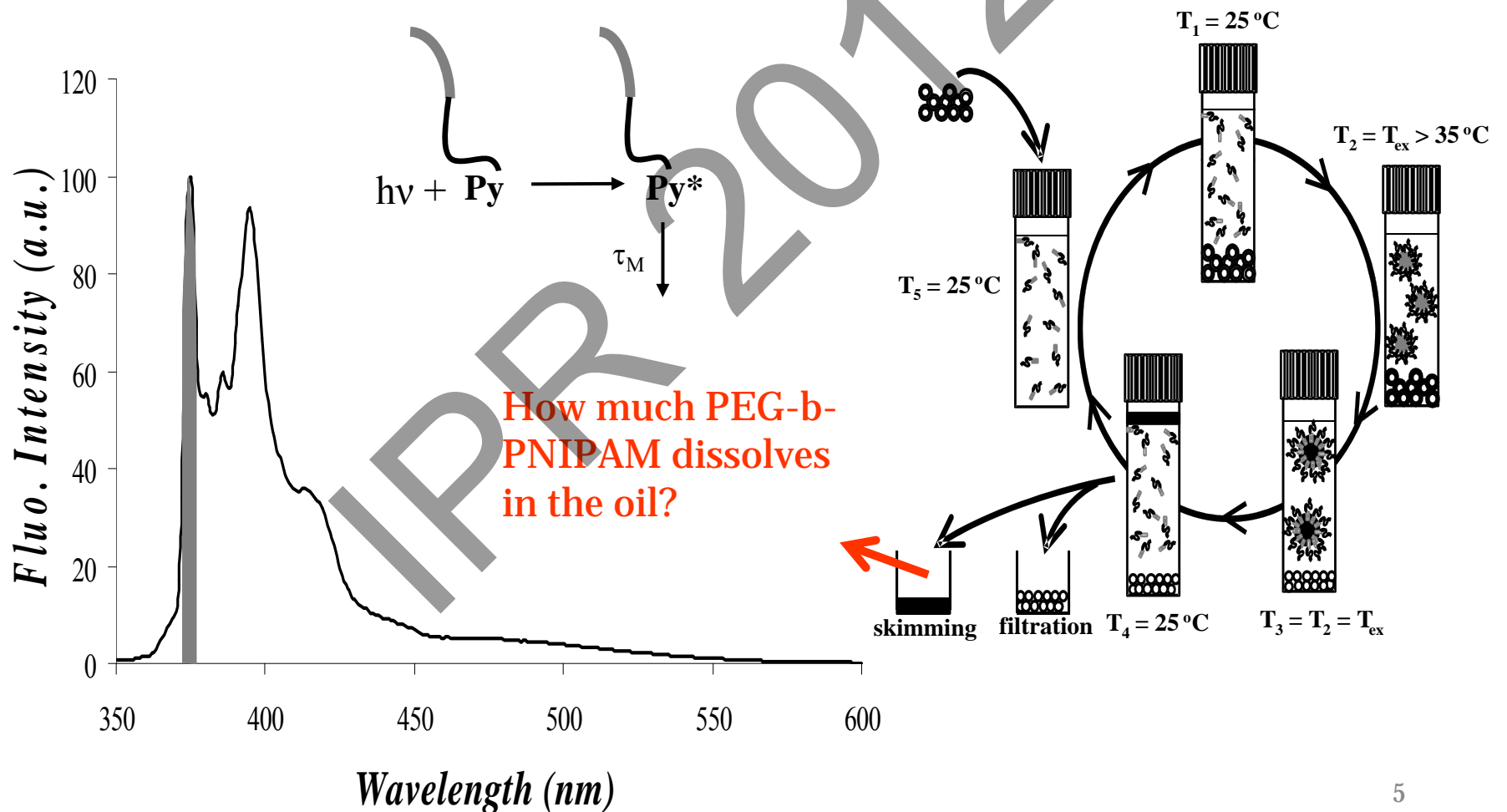
# Synthesis of PEG-*b*-PNIPAM-Py by Atom Transfer Radical Polymerization (ATRP)



Mei, A.; Guo, X.; Ding, Y.; Zhang, X.; Xu, J.; Fan, Z.; Du, B. *Macromolecules* **2010**, *43*, 7312-7320.

# Determination of the Percentage Recovery of PEG-*b*-PNIPAM-Py

- Pyrene Fluorescence



# Acknowledgements

- Funding from Imperial Oil and NSERC



Imperial Oil



**NSERC**  
**CRSNG**

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