Optimization of simultaneous ultrasound assisted toxic dyes adsorption conditions from single and multi-components using central composite design: Application of derivative spectrophotometry and evaluation of the kinetics and isotherms

Ebrahim Sharifpour, Mehrorang Ghaedi, Hedayat Haddadi

PII: S1350-4177(16)30380-7
DOI: http://dx.doi.org/10.1016/j.ultsonch.2016.11.011
Reference: ULTSON 3425

To appear in: *Ultrasonics Sonochemistry*

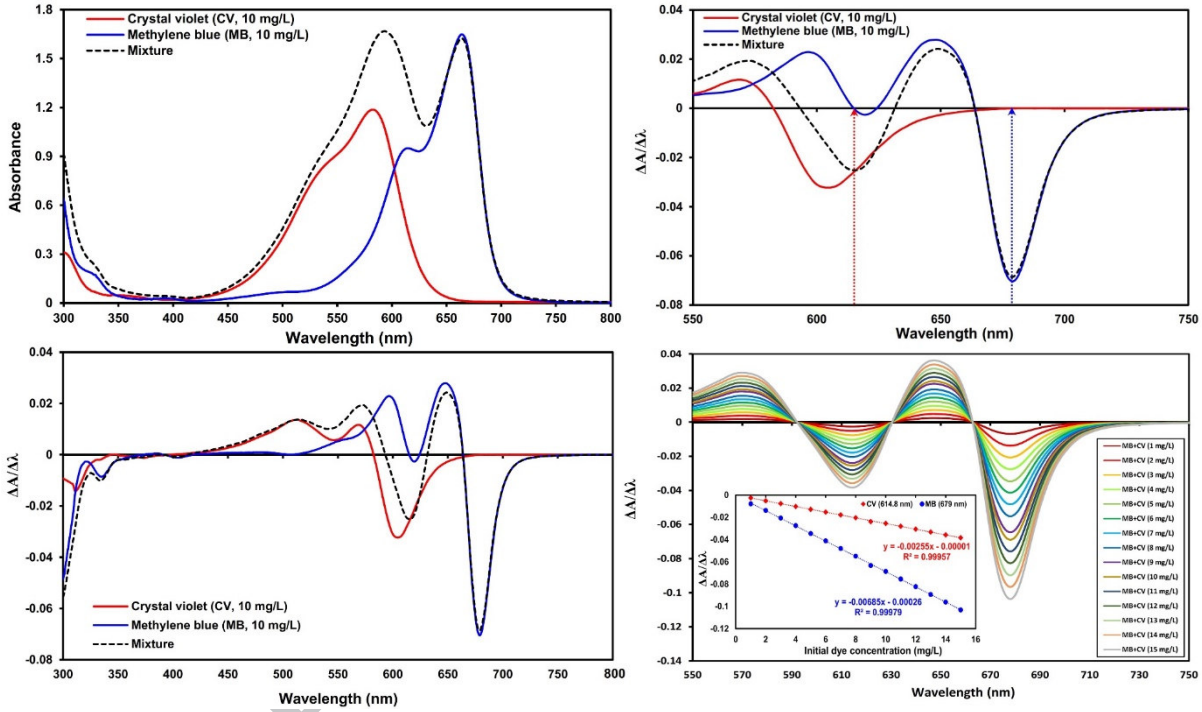
Received Date: 23 May 2016
Revised Date: 6 November 2016
Accepted Date: 7 November 2016

Please cite this article as: E. Sharifpour, M. Ghaedi, H. Haddadi, Optimization of simultaneous ultrasound assisted toxic dyes adsorption conditions from single and multi-components using central composite design: Application of derivative spectrophotometry and evaluation of the kinetics and isotherms, *Ultrasonics Sonochemistry* (2016), doi: http://dx.doi.org/10.1016/j.ultsonch.2016.11.011

Optimization of simultaneous ultrasound assisted toxic dyes adsorption conditions from single and multi-components using central composite design: Application of derivative spectrophotometry and evaluation of the kinetics and isotherms

Ebrahim Sharifpour [a], Mehrorang Ghaedi *[b] and Hedayat Haddadi * [a, c]

[a] *Department of Chemistry, Faculty of Sciences, Shahrekord University, P.O. Box 115, Shahrekord, Iran*
[b] *Chemistry Department, Yasouj University, Yasouj 75918-74831, Iran.*
[c] *Nanotechnology Research Center, Shahrekord University, 8818634141, Shahrekord, Iran*



Graphical abstract

* Corresponding author: Tel/Fax: +98 741 2223048.
E-mail address: m_ghaedi@mail.yu.ac.ir; m_ghaedi@yahoo.com (M. Ghaedi)
* Corresponding author: Tel/Fax: +98 3832324419.
E-mail address: hedayathaddadi@yahoo.com (Hedayat Haddadi)