

# Andy Warhol and His Amazing Technicolor Shoes: Characterizing the Synthetic Dyes found in Dr. Ph. Martin's Synchromatic Transparent Watercolors and used in *À la recherche du shoe perdu*

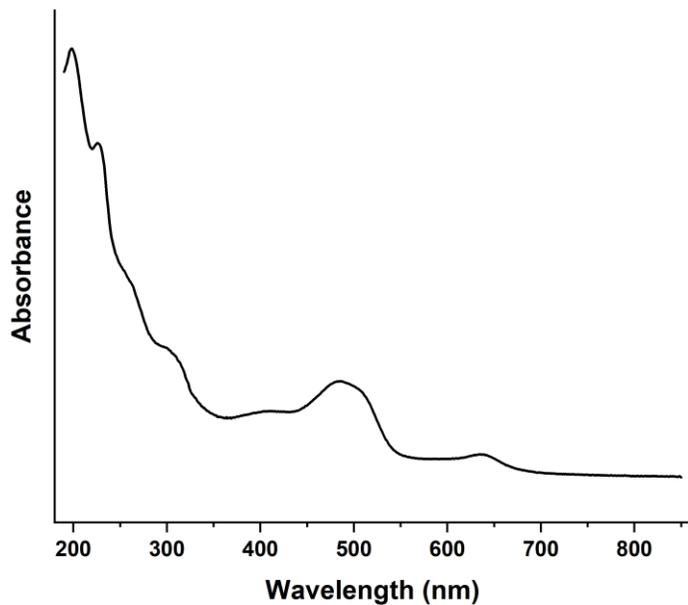
Abed Haddad<sup>1\*</sup>, Toni-Nakie-Miller<sup>2</sup>, Josephine Jenks<sup>3</sup>, Glen Kowach<sup>2,4</sup>

1. The David Booth Conservation Department, The Museum of Modern Art, 11 West 53<sup>rd</sup> Street, New York, 10019 NY, USA
2. Chemistry Department, The City College of New York, 160 Convent Avenue New York, NY 10031
3. The Conservation Center at The Institute of Fine Arts of New York University, The Stephen Chan House 14 East 78<sup>th</sup> Street New York, NY 10075
4. Ph.D. Program in Chemistry, The Graduate Center, City University of New York, 365 5<sup>th</sup> Avenue NY 10016

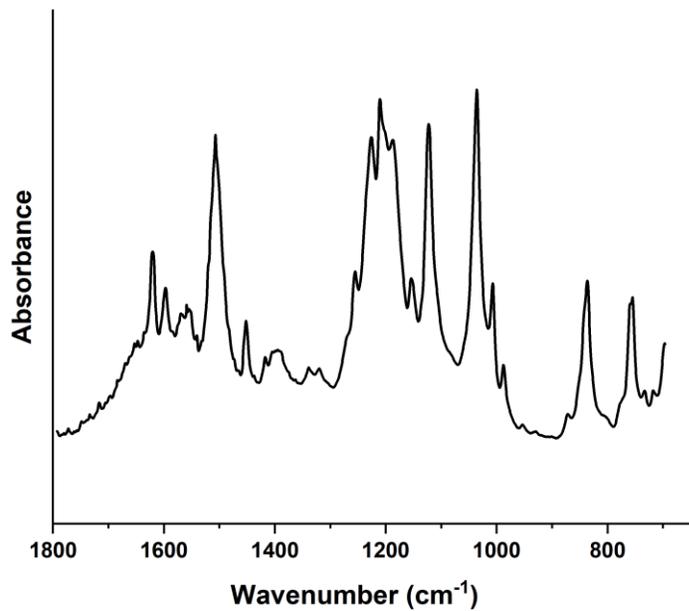
## Supplementary Materials

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Figure S1.1 Beige

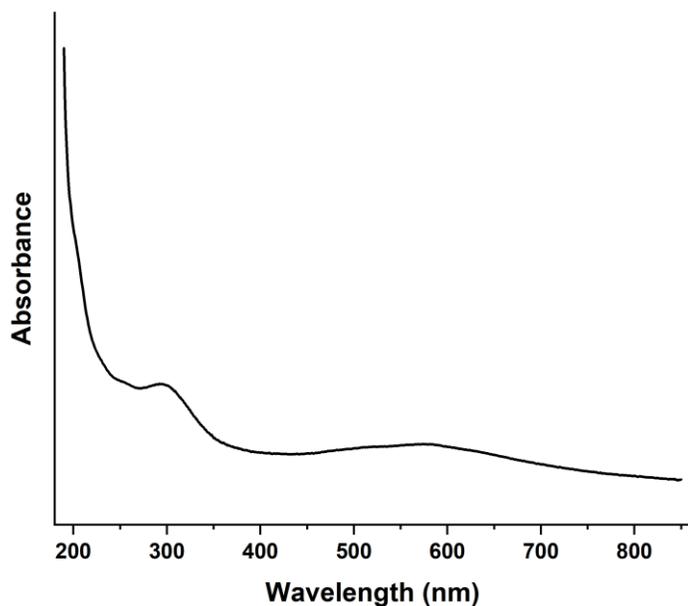


UV-Vis

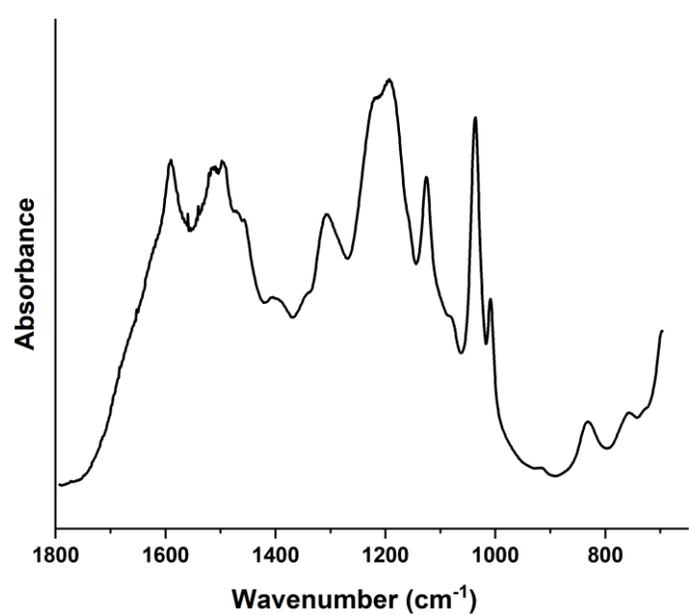


μ-FTIR

Figure S1.2 Black

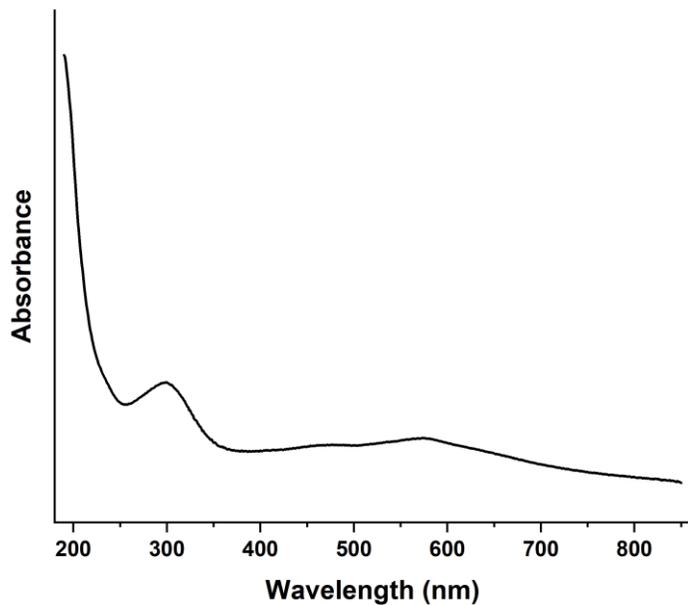


UV-Vis



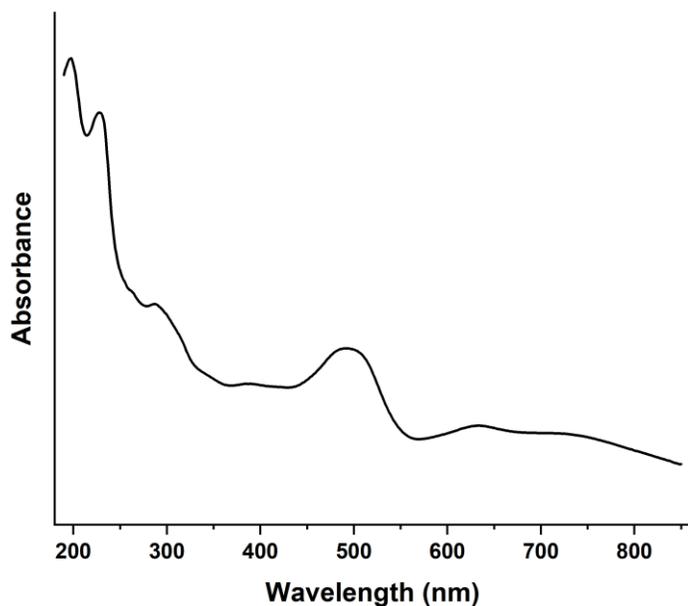
μ-FTIR

Figure S1.3 Bluish Black

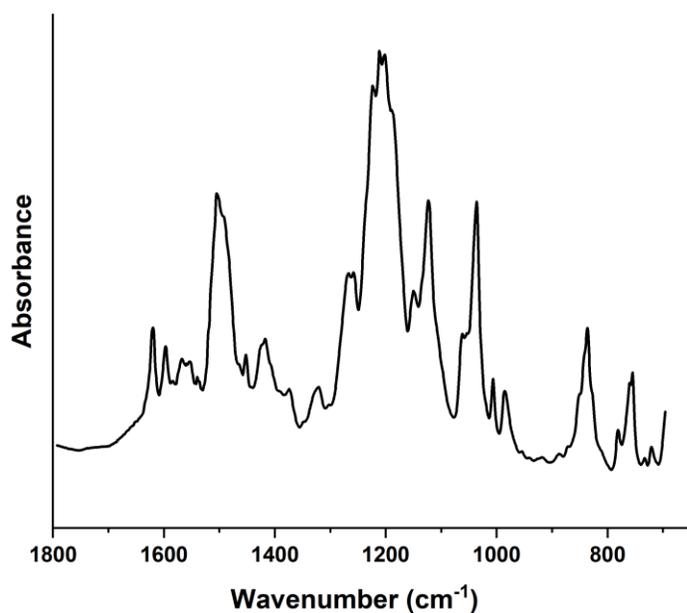


UV-Vis

Figure S1.4 Burnt Sienna

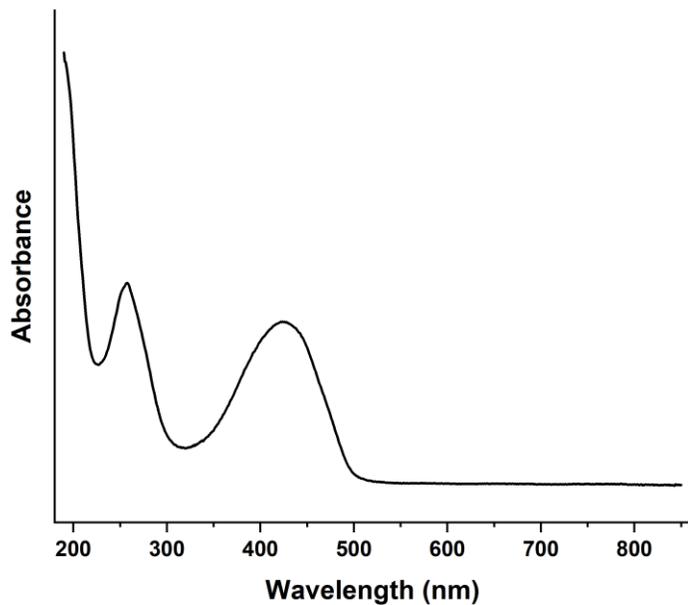


UV-Vis

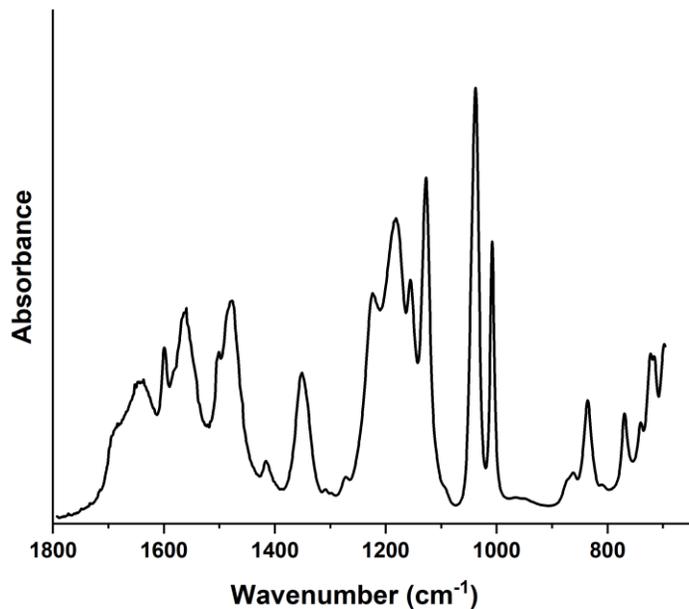


μ-FTIR

Figure S1.5 Cadmium

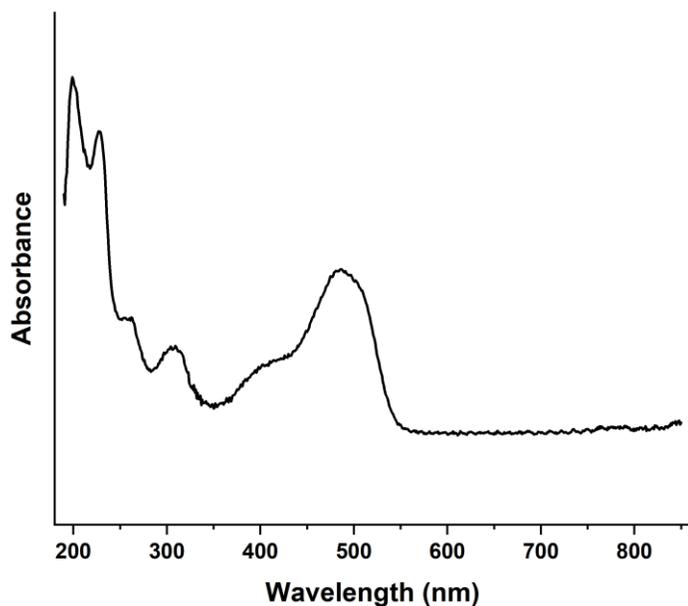


UV-Vis

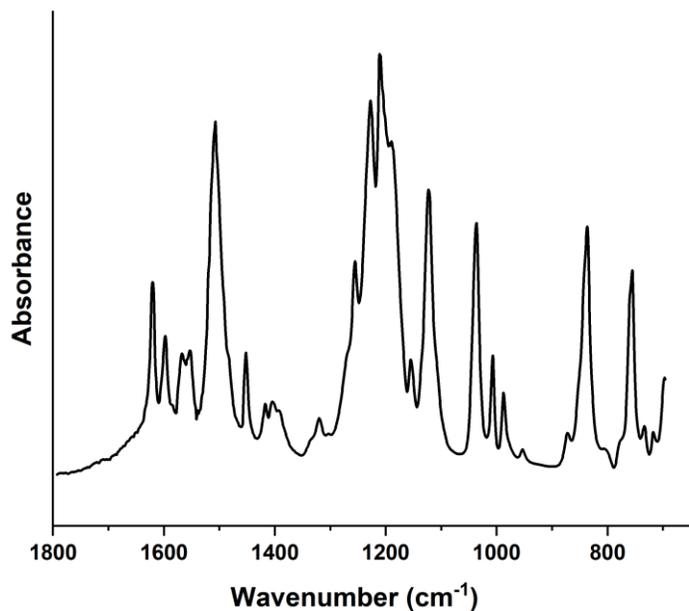


μ-FTIR

Figure S1.6 Cadmium Orange

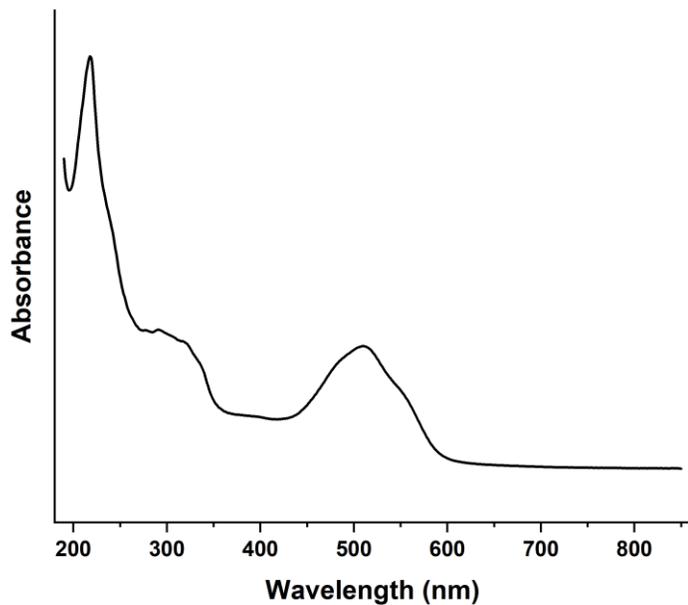


UV-Vis

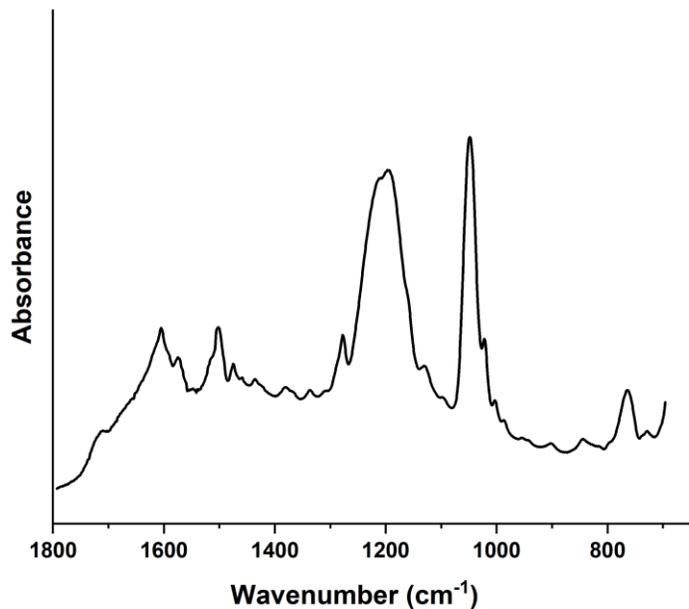


μ-FTIR

Figure S1.7 Carmine

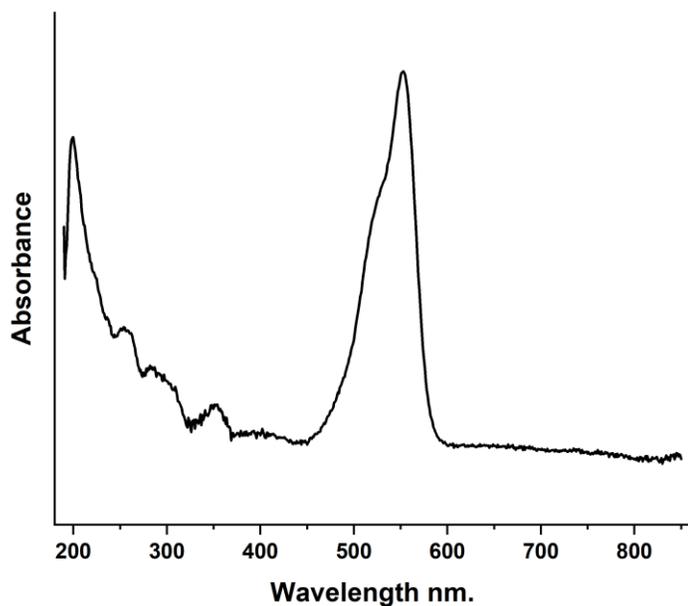


UV-Vis

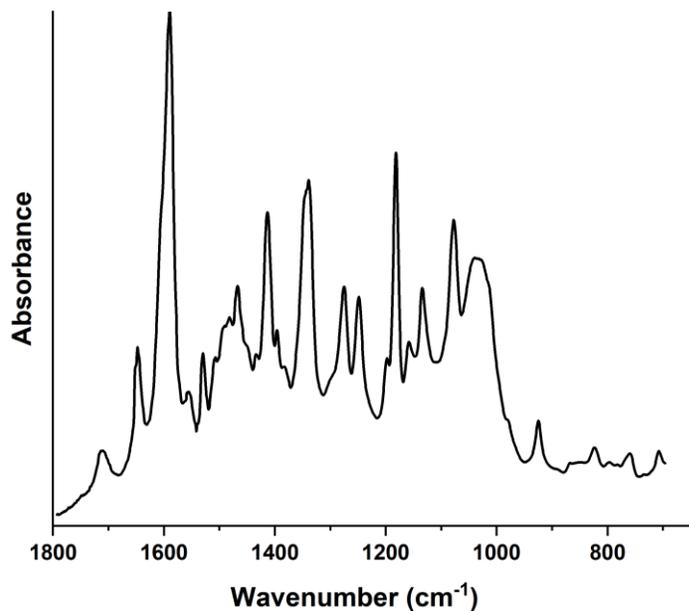


μ-FTIR

Figure S1.8 Cerise

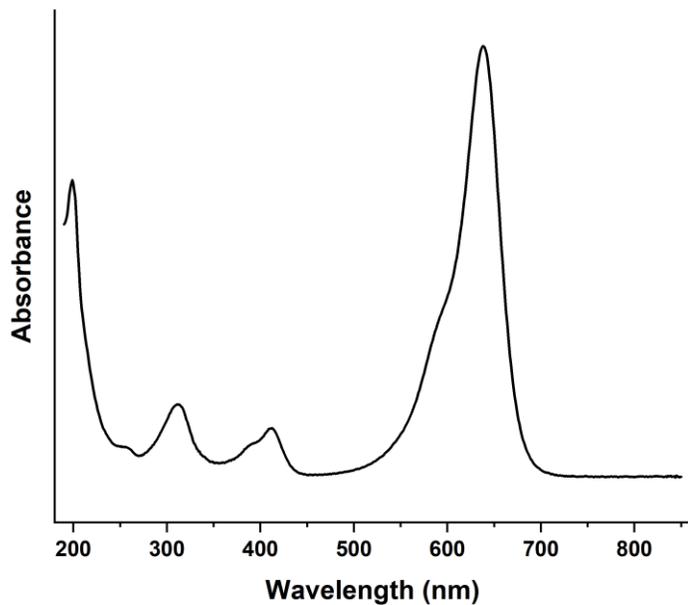


UV-Vis

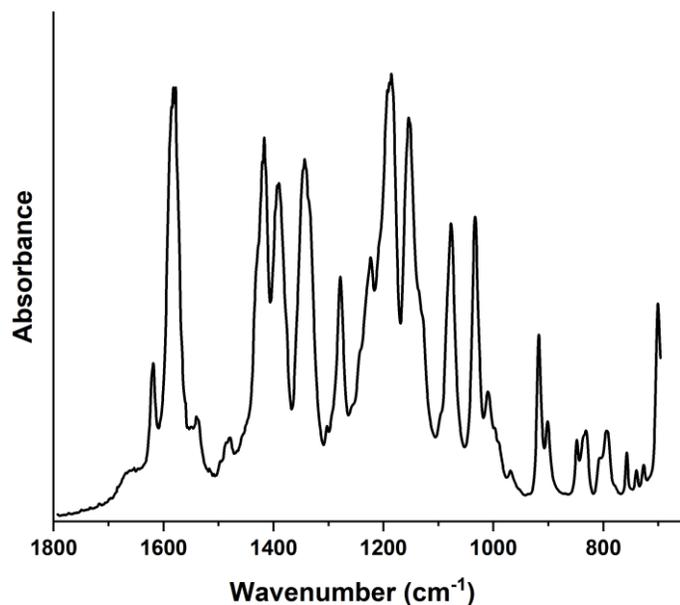


μ-FTIR

Figure S1.9 Cerulean Blue

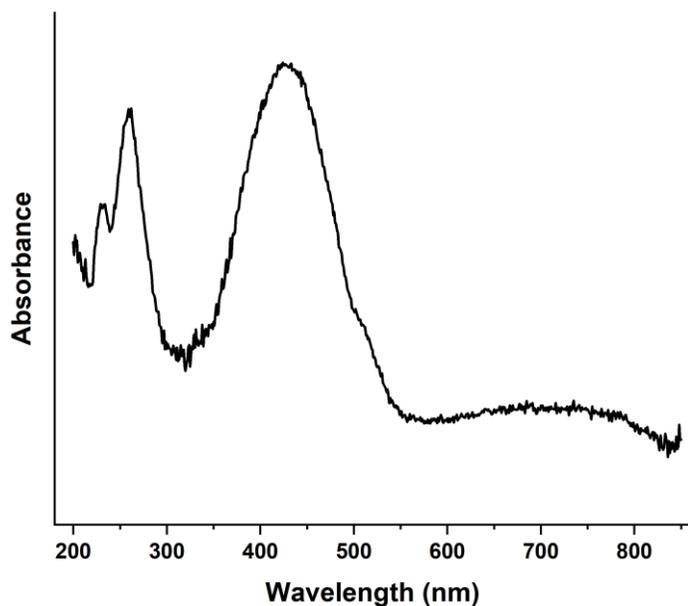


UV-Vis

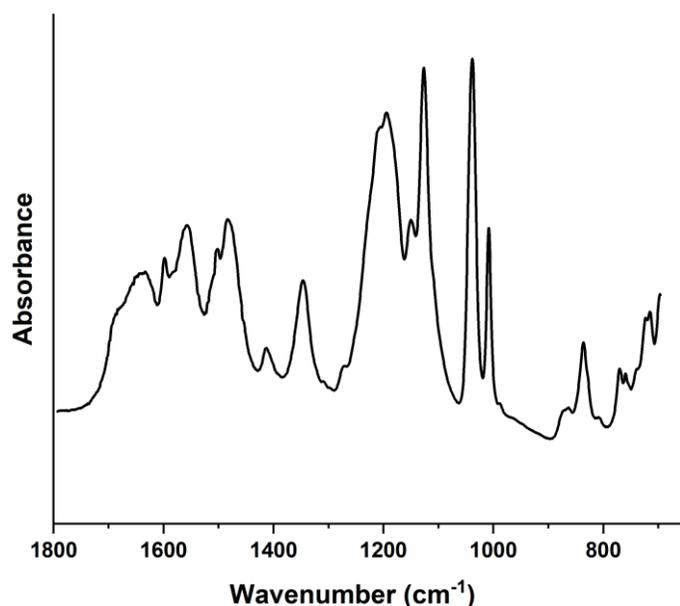


μ-FTIR

Figure S1.10 Chrome Yellow

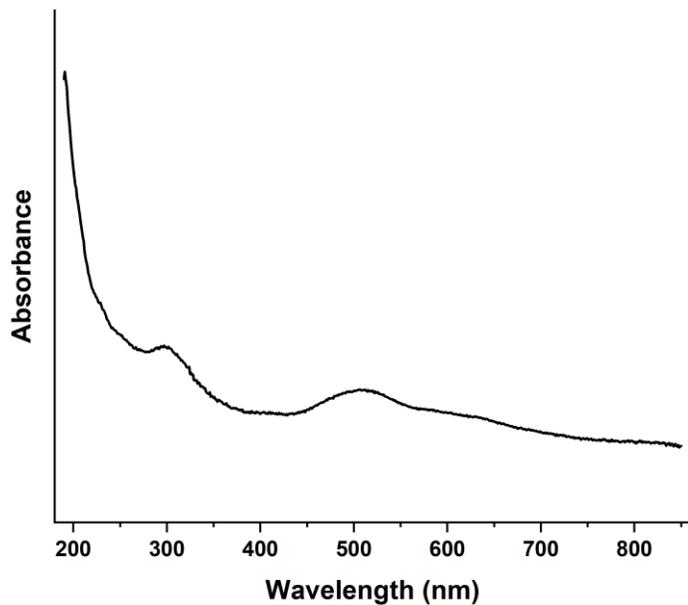


UV-Vis

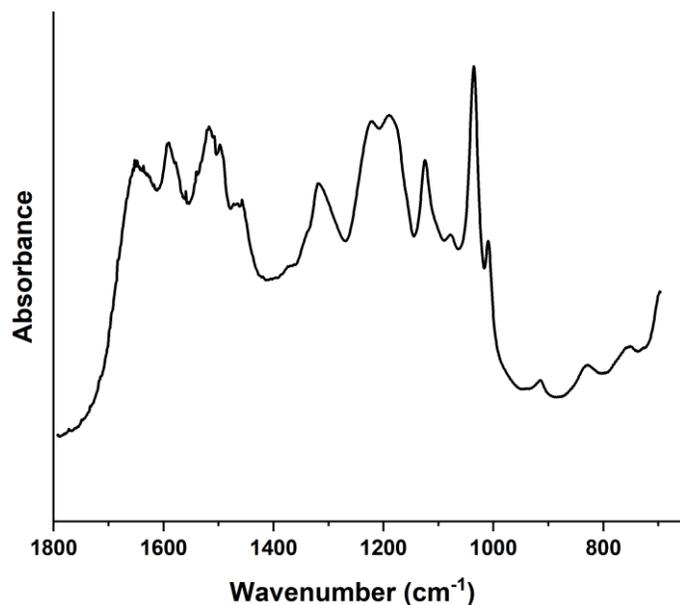


μ-FTIR

Figure S1.11 Dark Gray

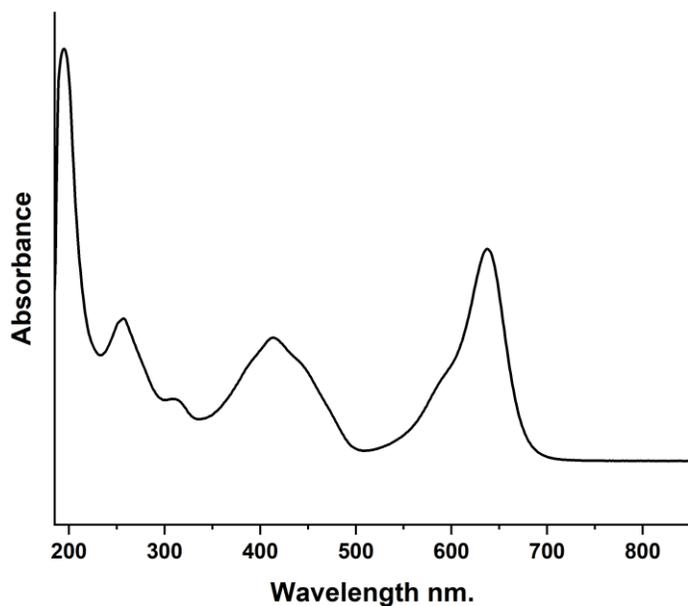


UV-Vis

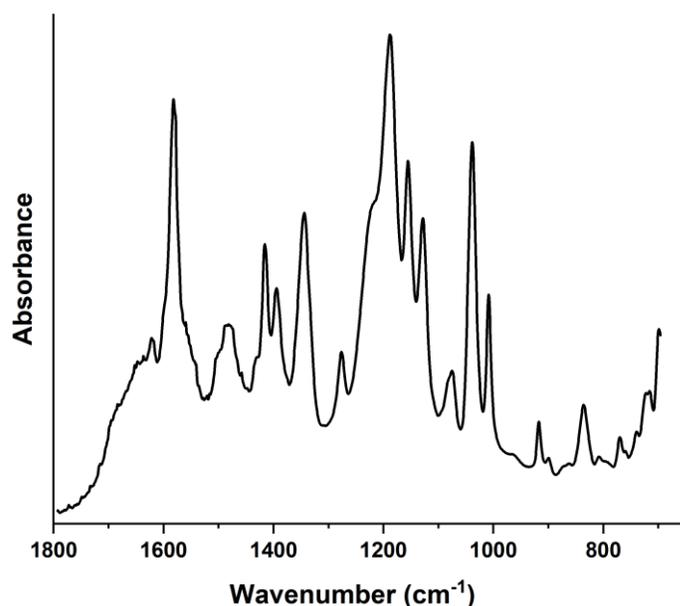


μ-FTIR

Figure S1.12 Emerald

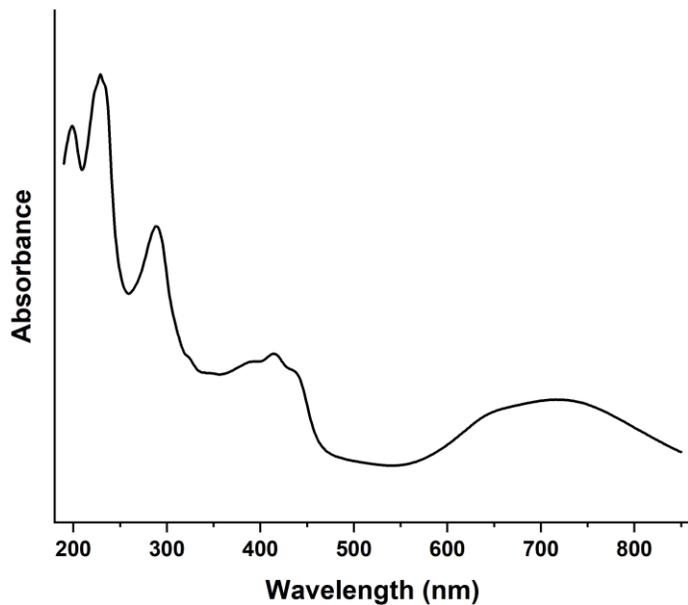


UV-Vis

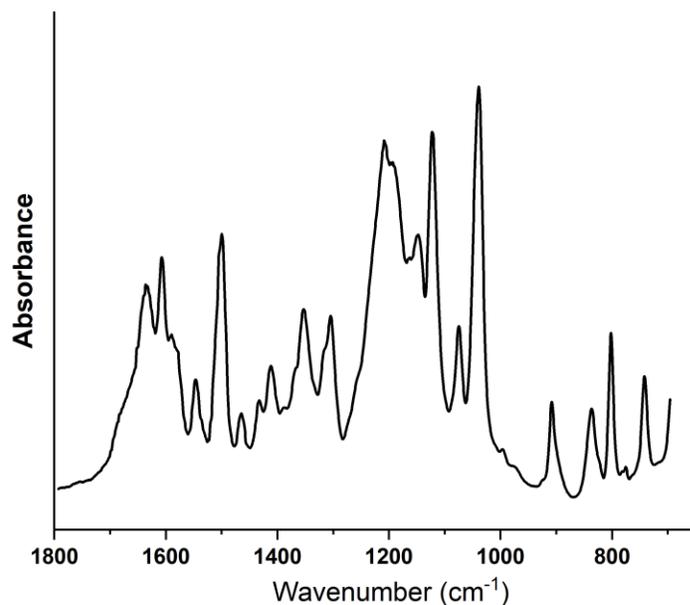


μ-FTIR

Figure S1.13 Hooker's Green

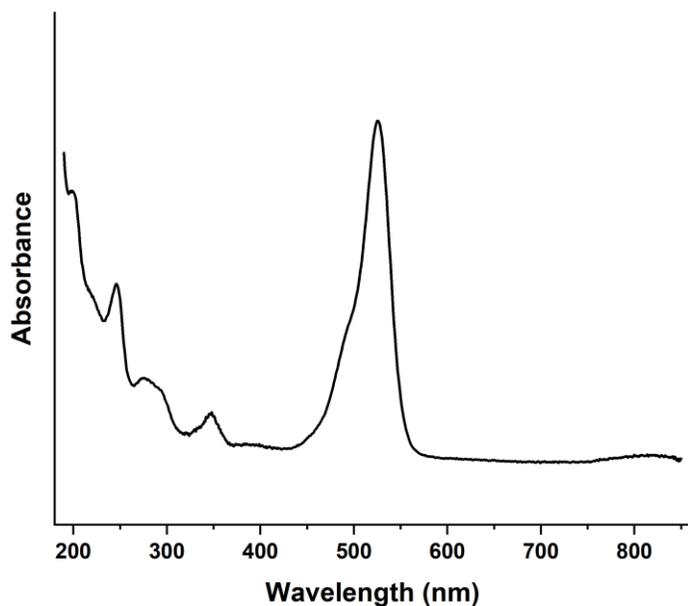


UV-Vis

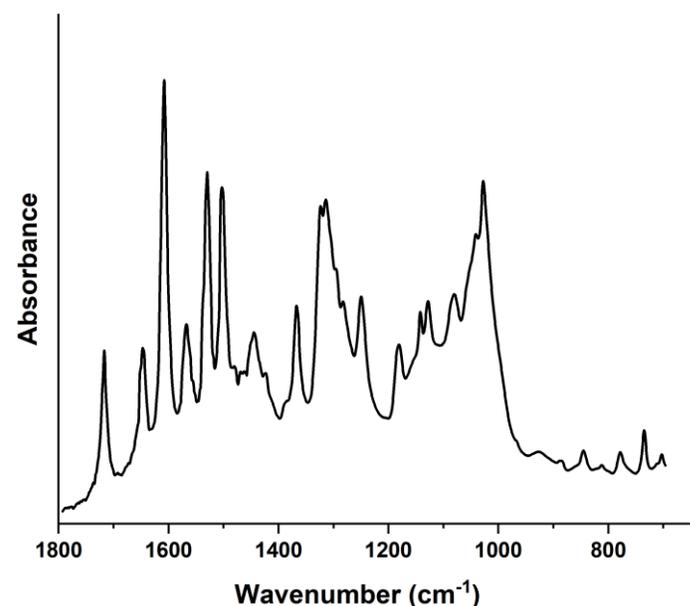


μ-FTIR

Figure S1.14 Lake

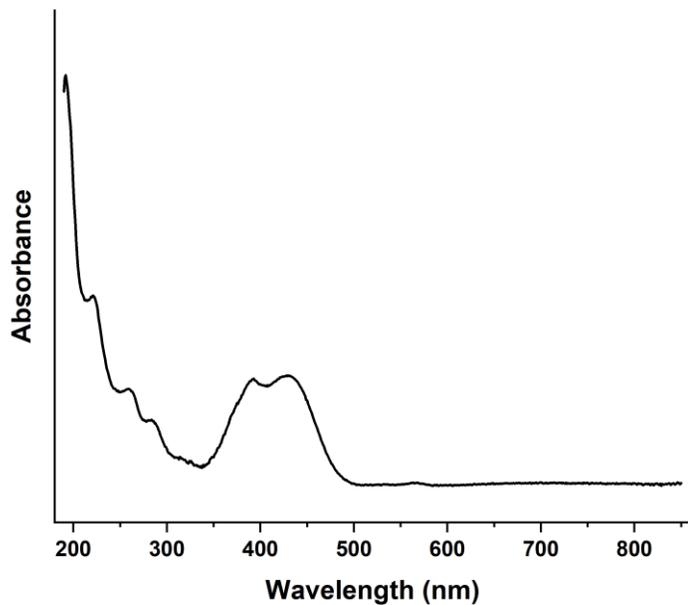


UV-Vis



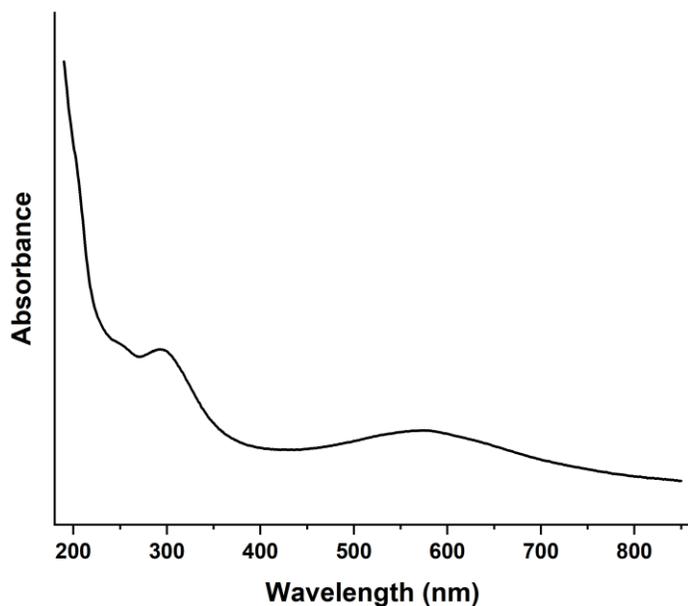
μ-FTIR

Figure S1.15 Lemon Yellow

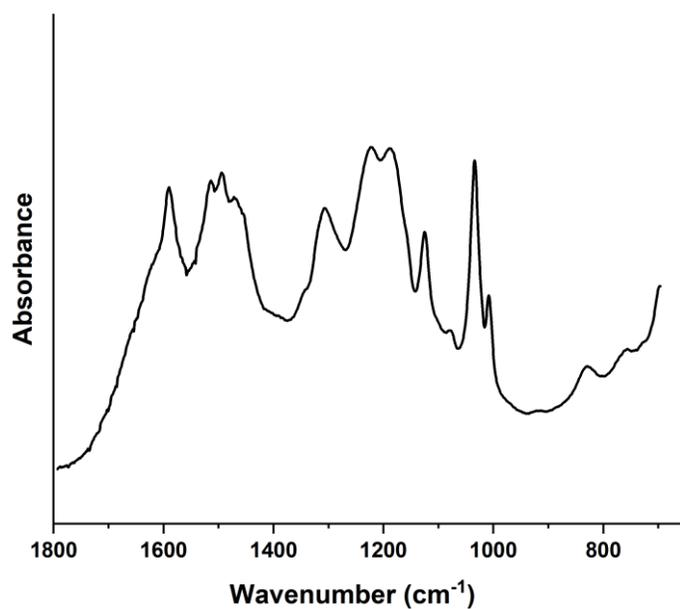


UV-Vis

Figure S1.16 Light Gray

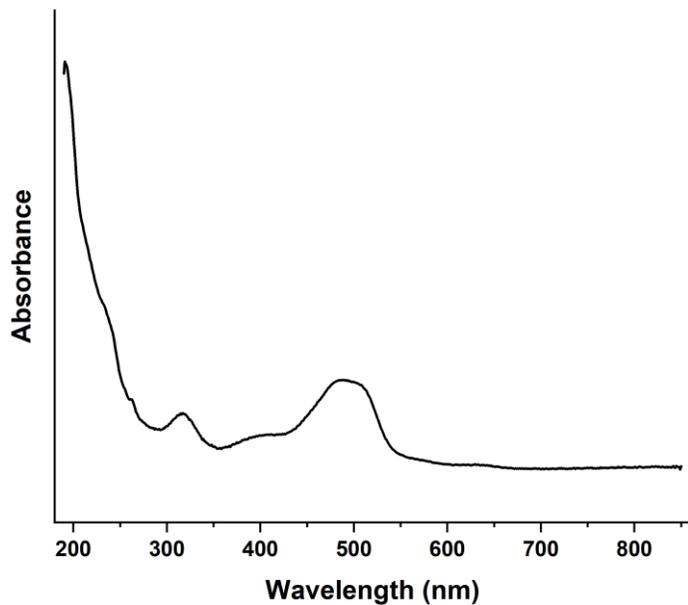


UV-Vis



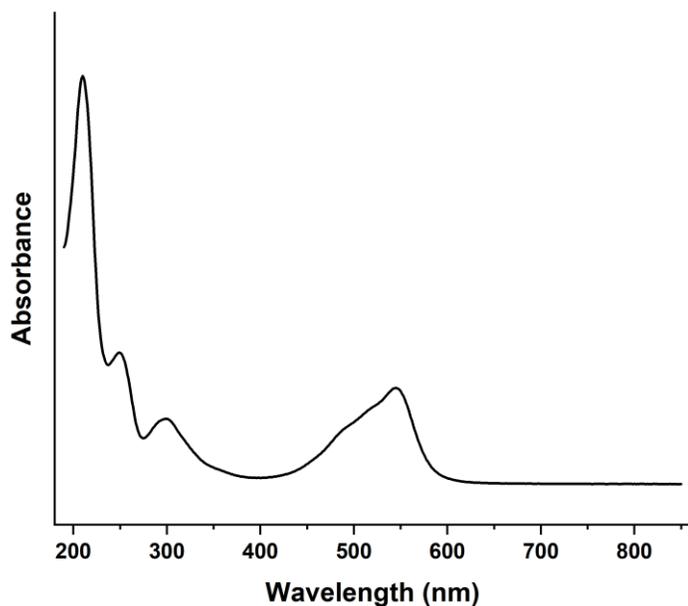
μ-FTIR

Figure S1.17 Light Brown

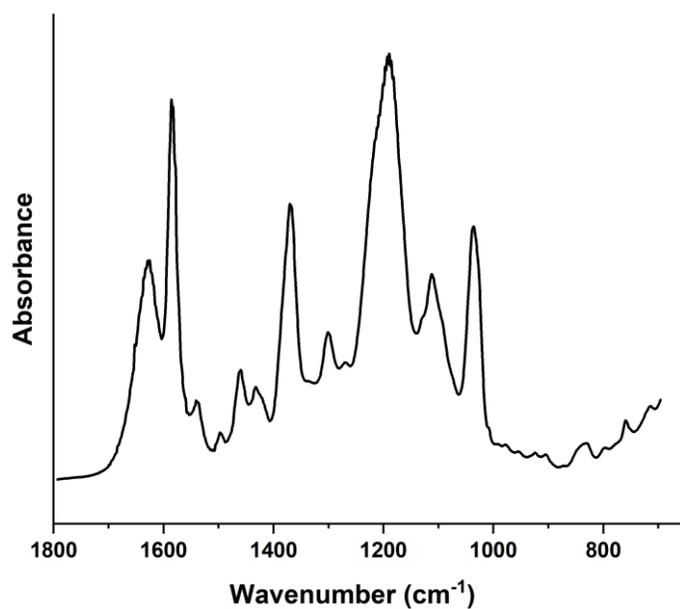


UV-Vis

Figure S1.18 Magenta

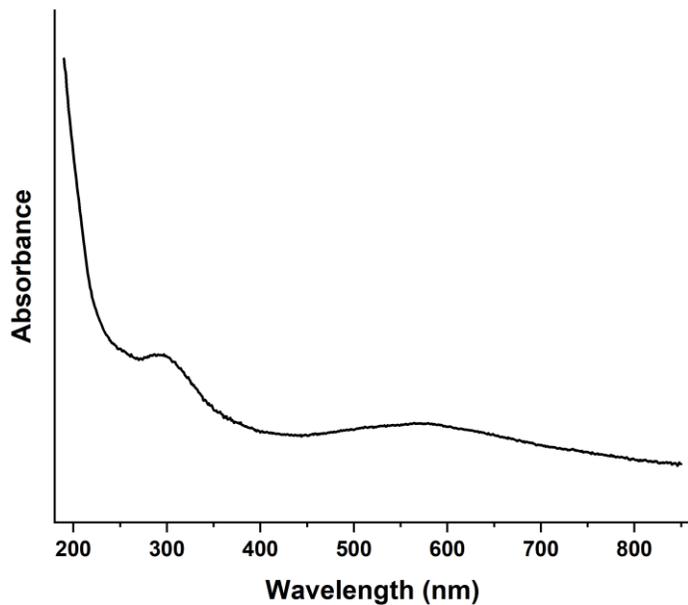


UV-Vis

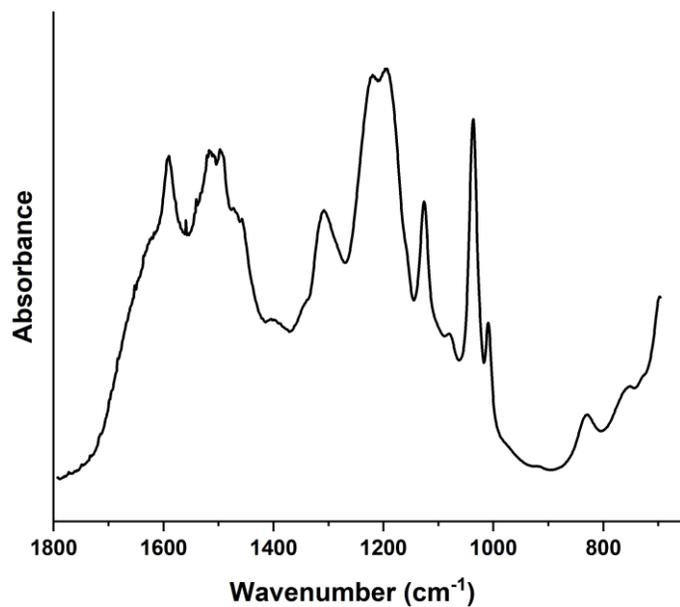


μ-FTIR

Figure S1.19 Medium Gray

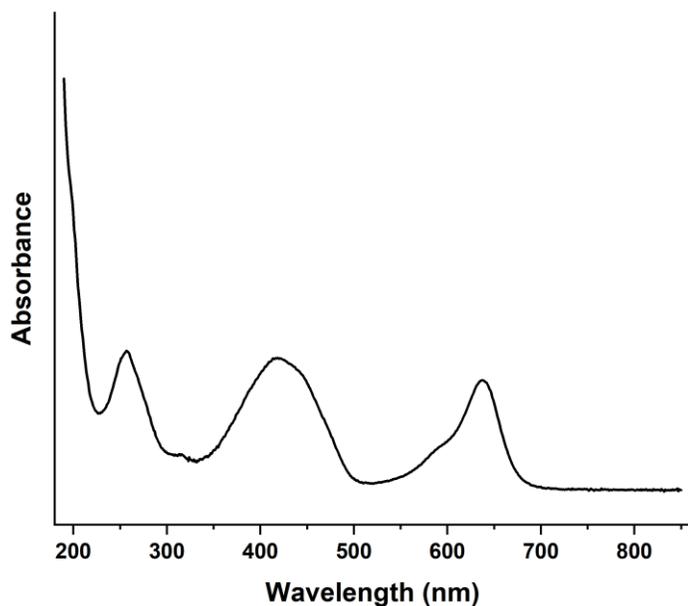


UV-Vis

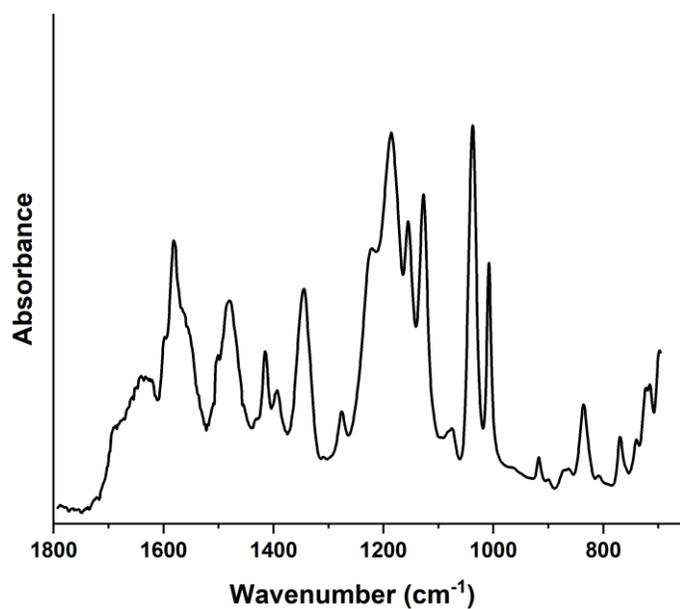


$\mu$ -FTIR

Figure S1.20 Nile Green

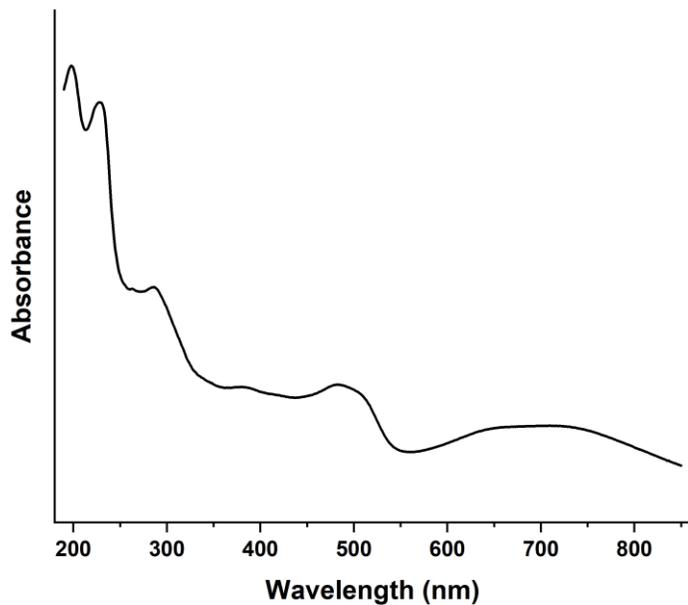


UV-Vis

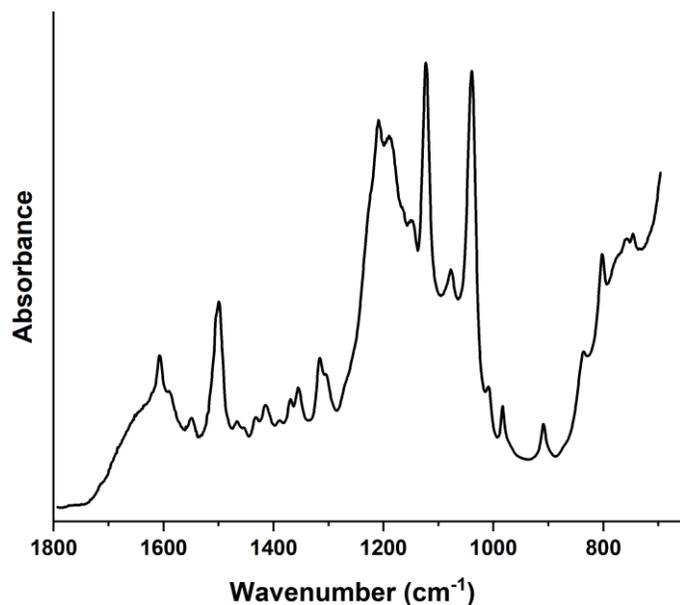


$\mu$ -FTIR

Figure S1.21 Olive Green

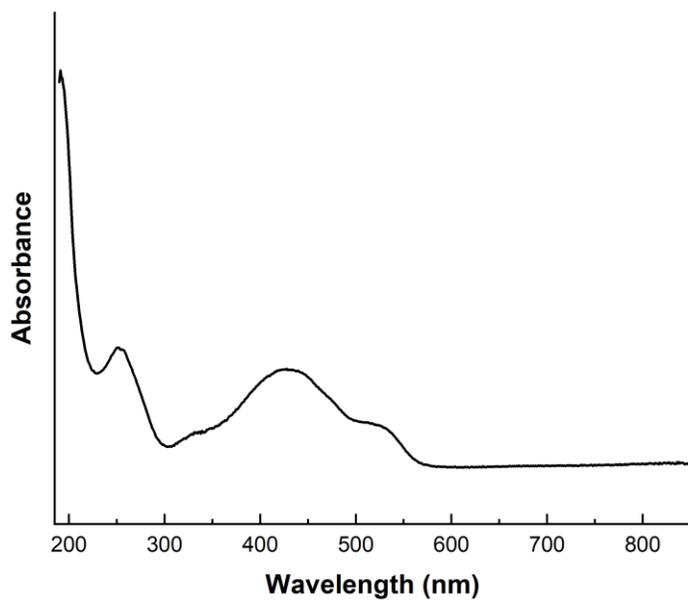


UV-Vis



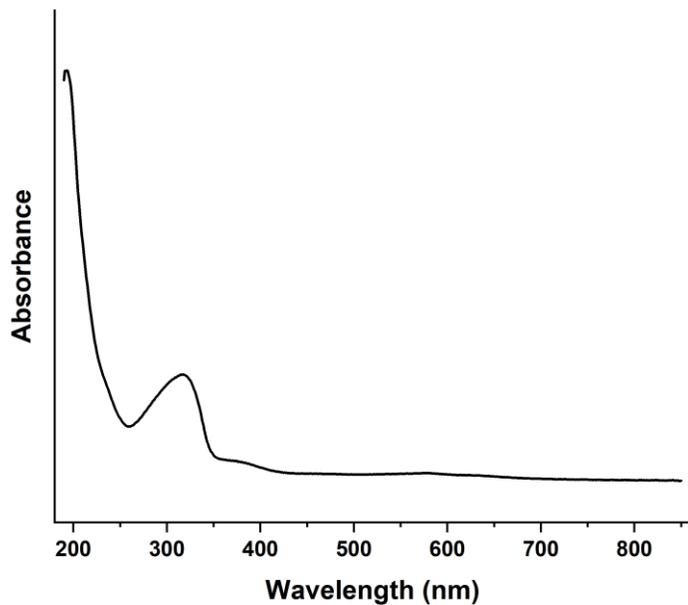
μ-FTIR

Figure S1.22 Orange



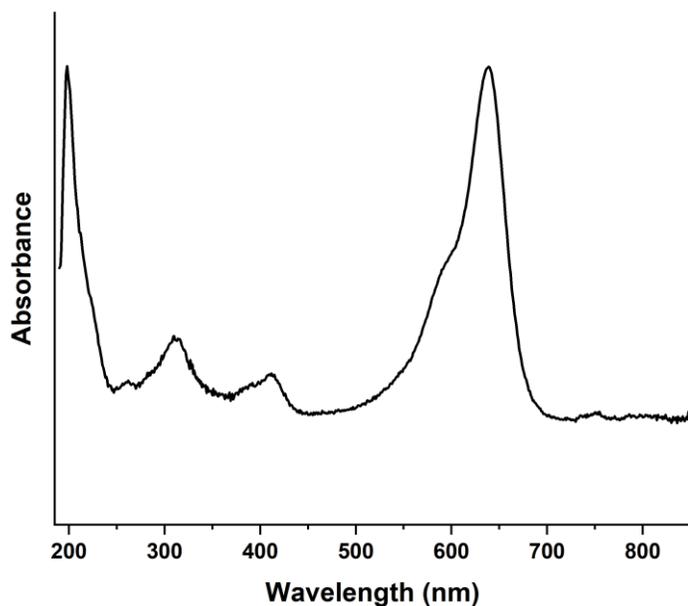
UV-Vis

Figure S1.23 Payne's Gray

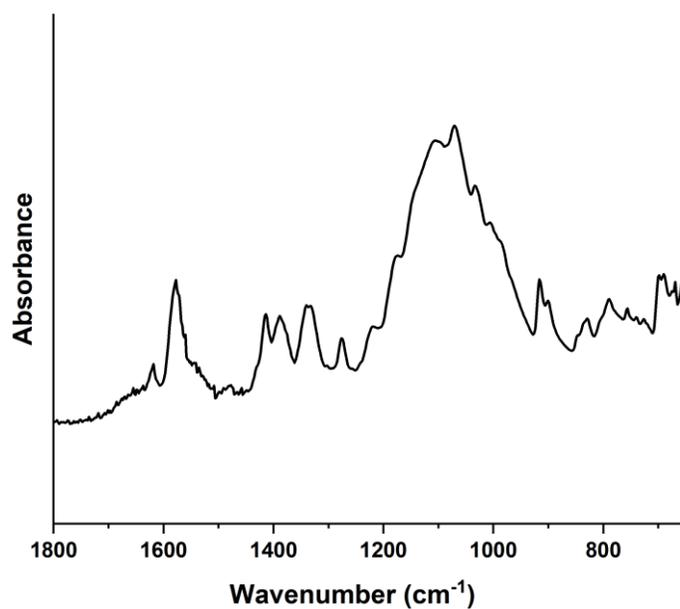


UV-Vis

Figure S1.24 Prussian Blue

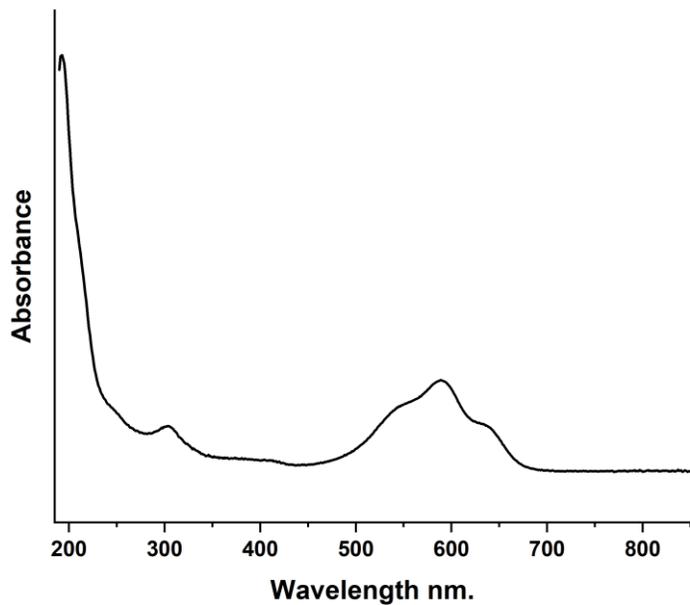


UV-Vis



μ-FTIR

**Figure S1.25 Purple**



**Figure S1.26 Reddish Brown**

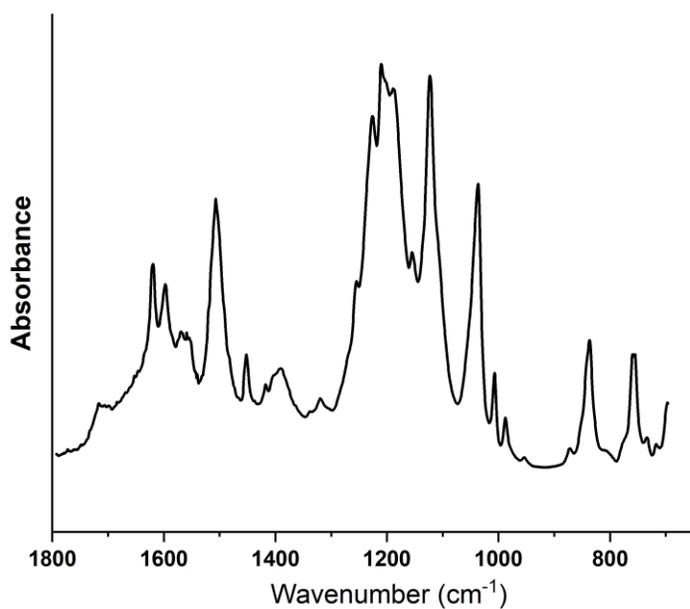
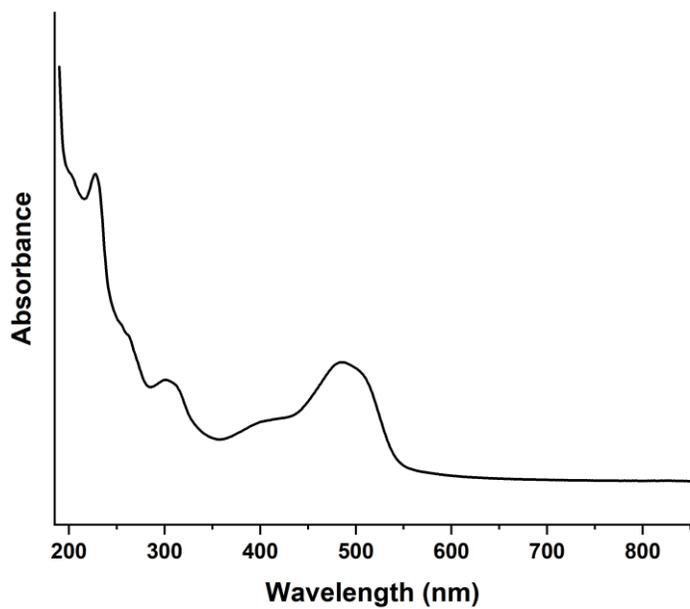
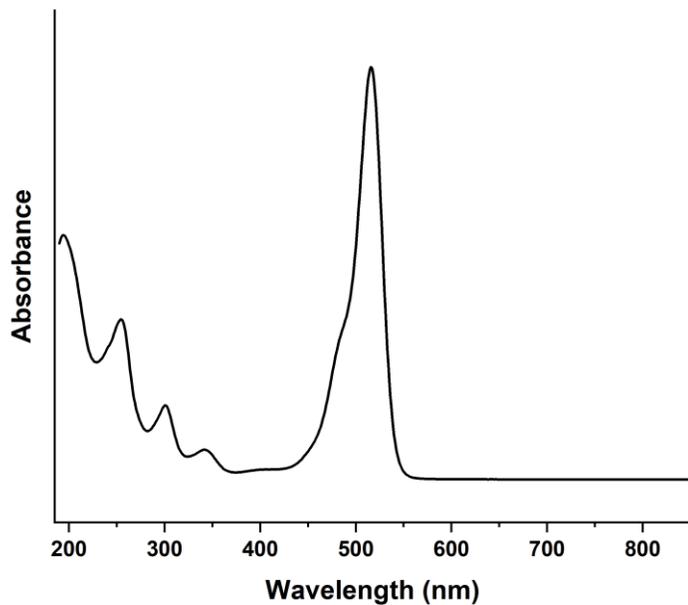
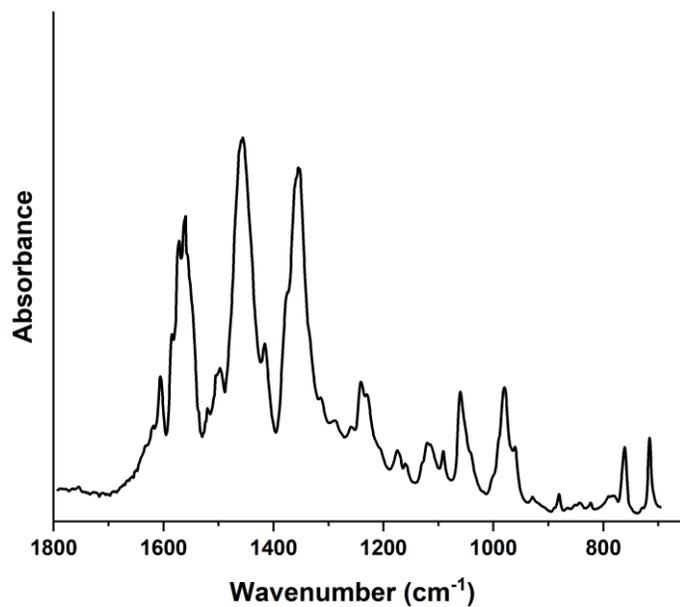


Figure S1.27 Rose Carthame

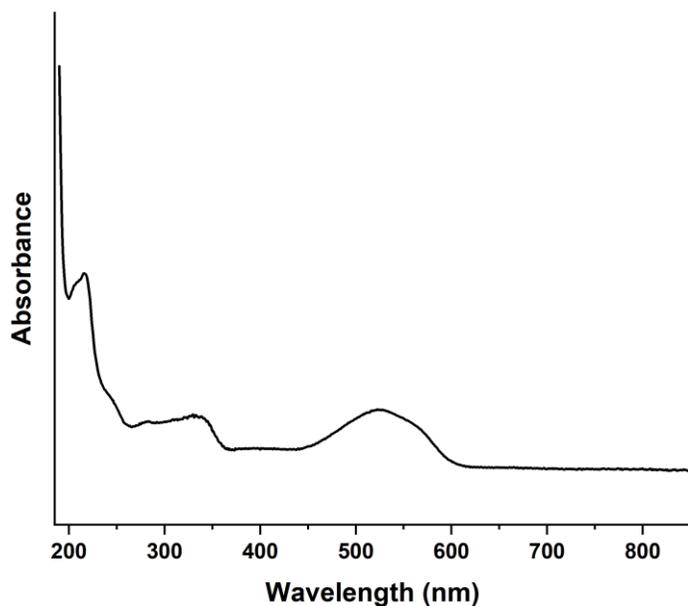


UV-Vis

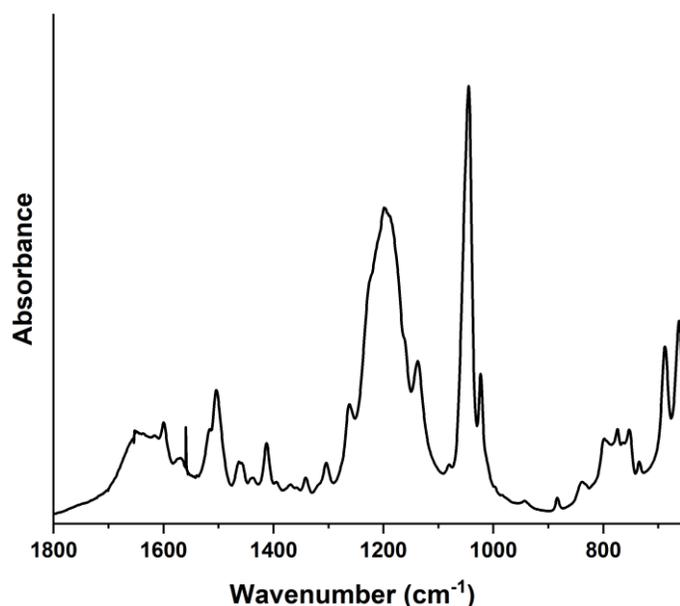


μ-FTIR

Figure S1.28 Rose Madder

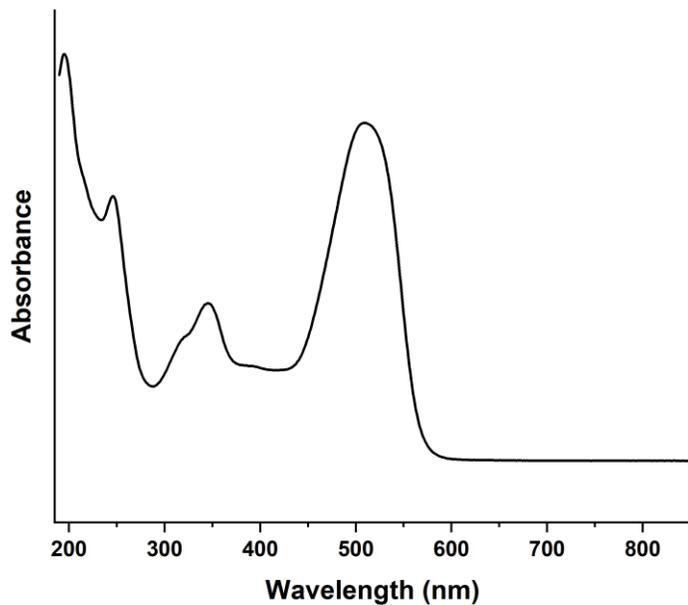


UV-Vis

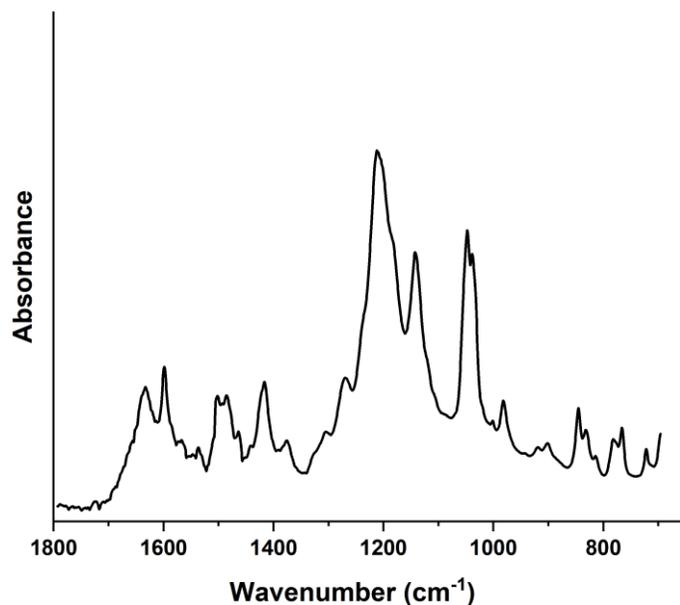


μ-FTIR

Figure S1.29 Scarlet

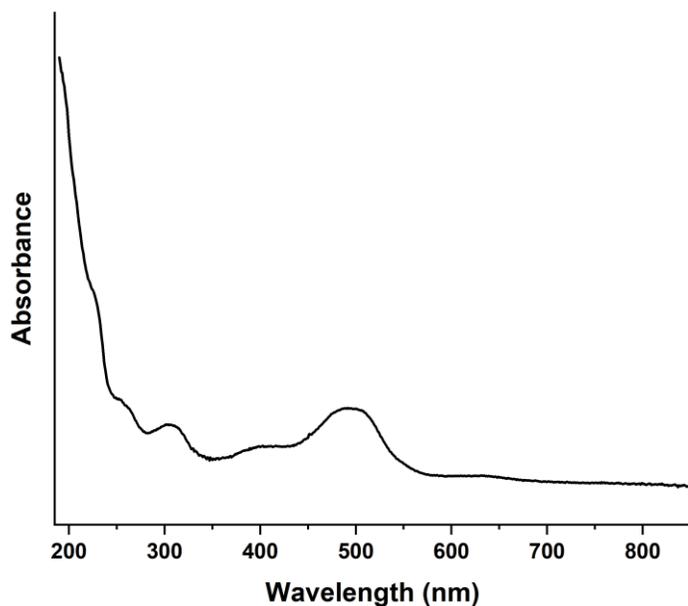


UV-Vis

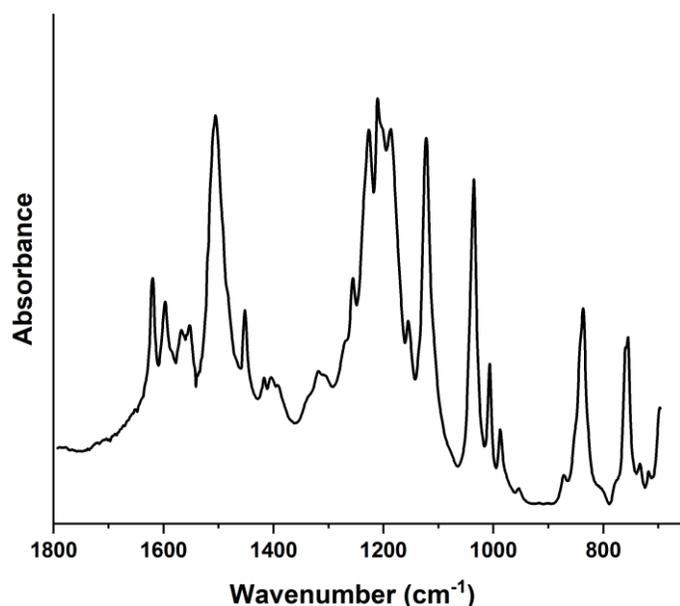


μ-FTIR

Figure S1.30 Sepia

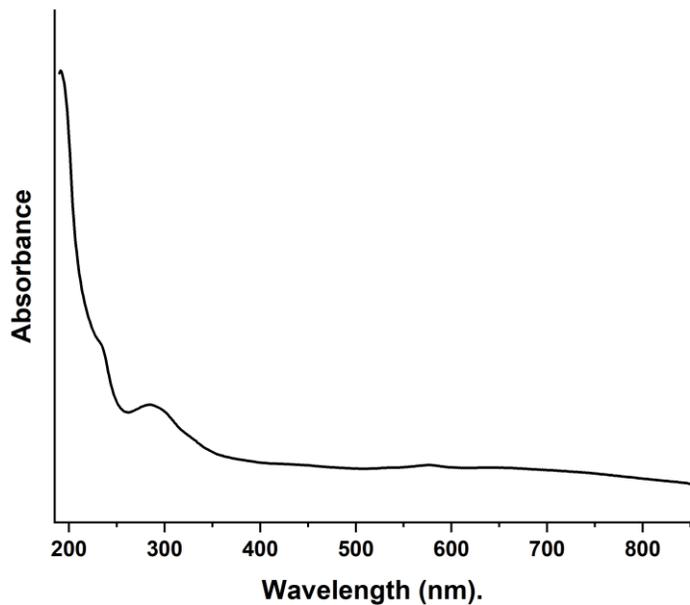


UV-Vis



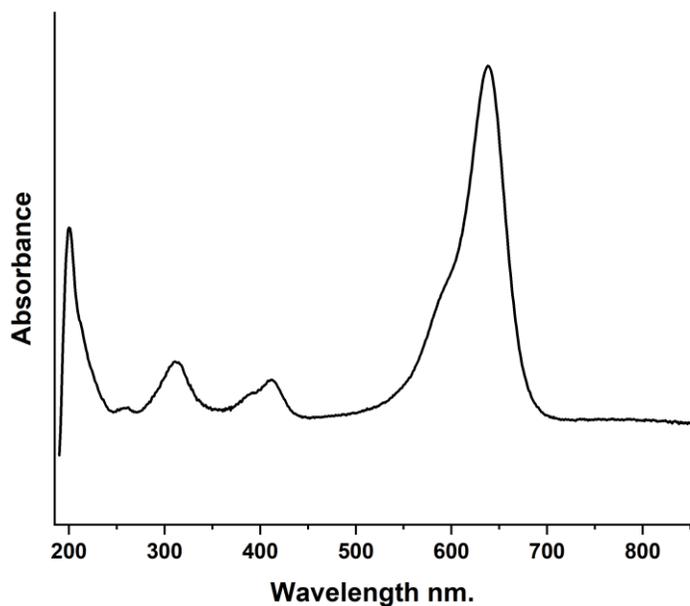
μ-FTIR

Figure S1.31 Stone Gray

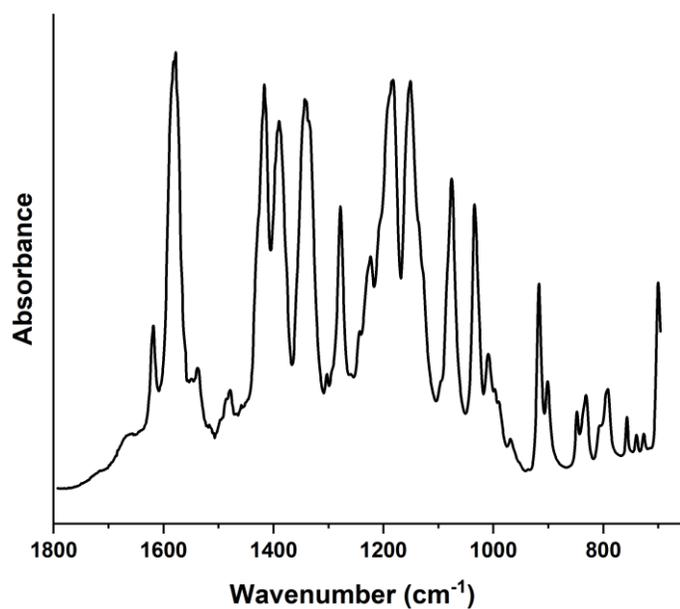


UV-Vis

Figure S1.32 Turquoise Blue

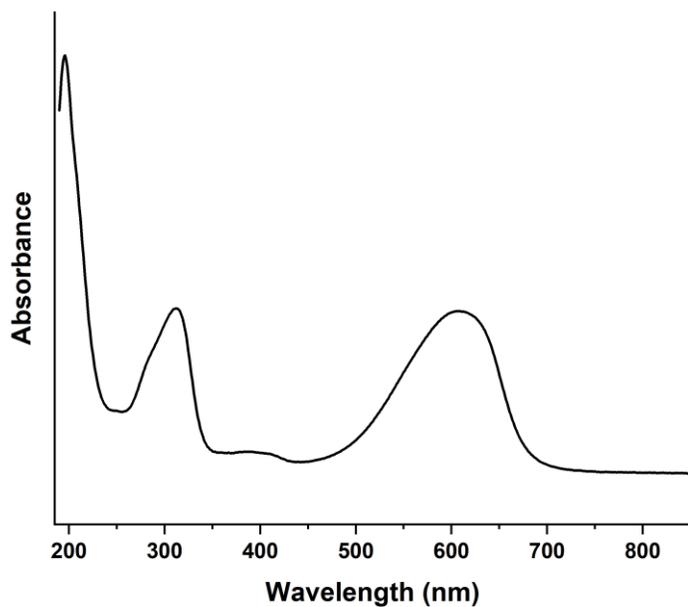


UV-Vis

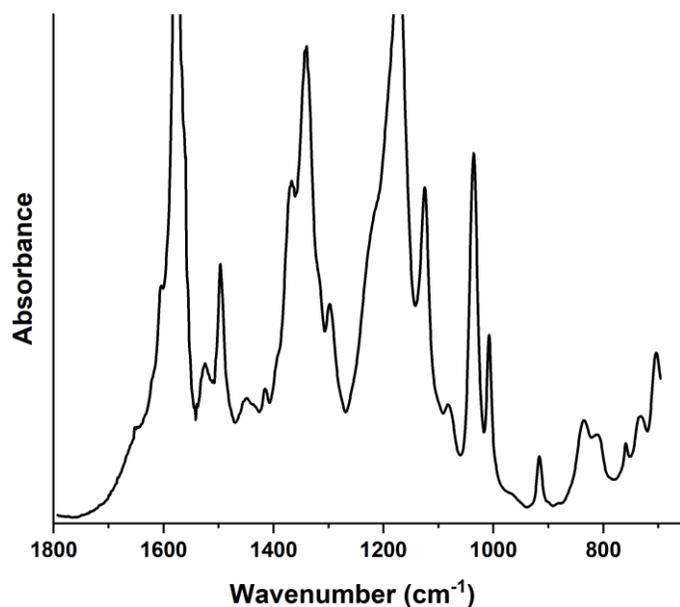


μ-FTIR

Figure S1.33 Ultramarine

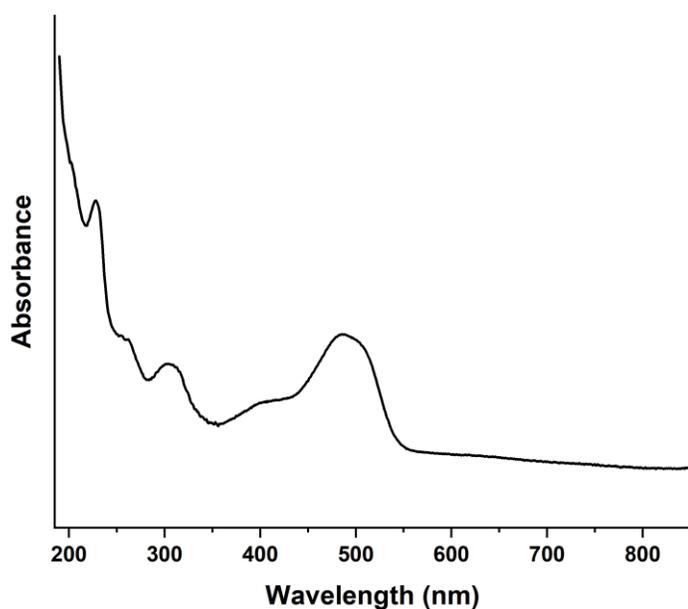


UV-Vis

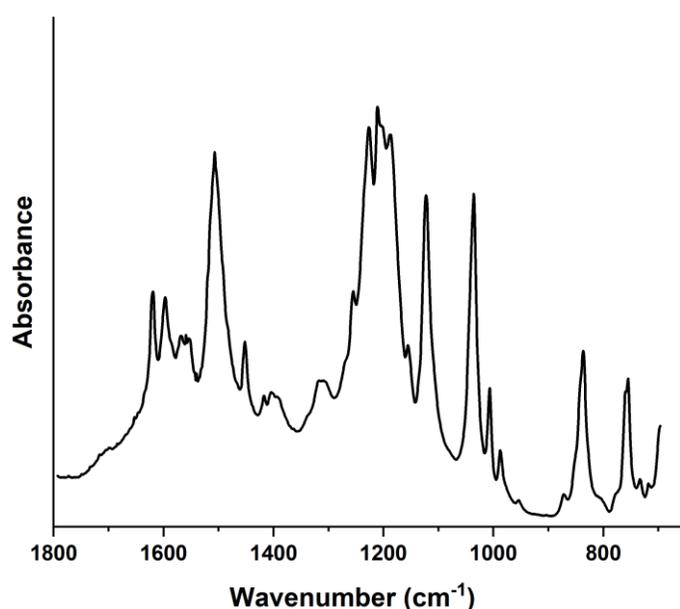


μ-FTIR

Figure S1.34 Van Dyke Brown

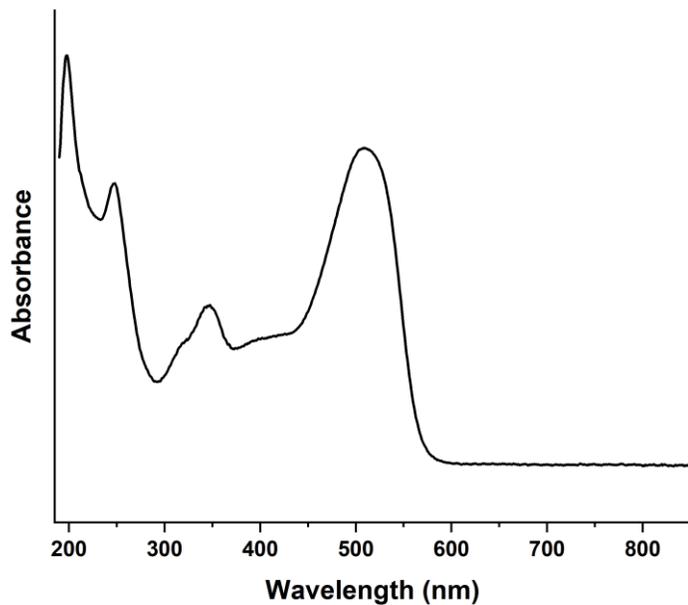


UV-Vis

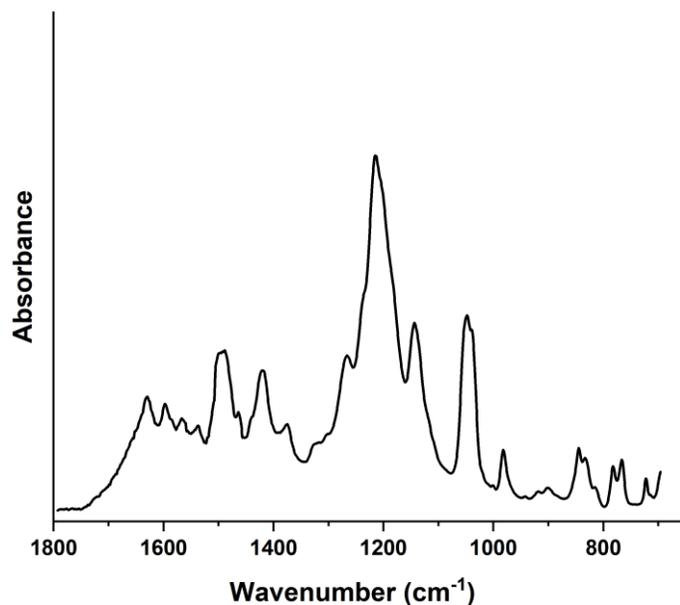


μ-FTIR

Figure S1.35 Vermilion

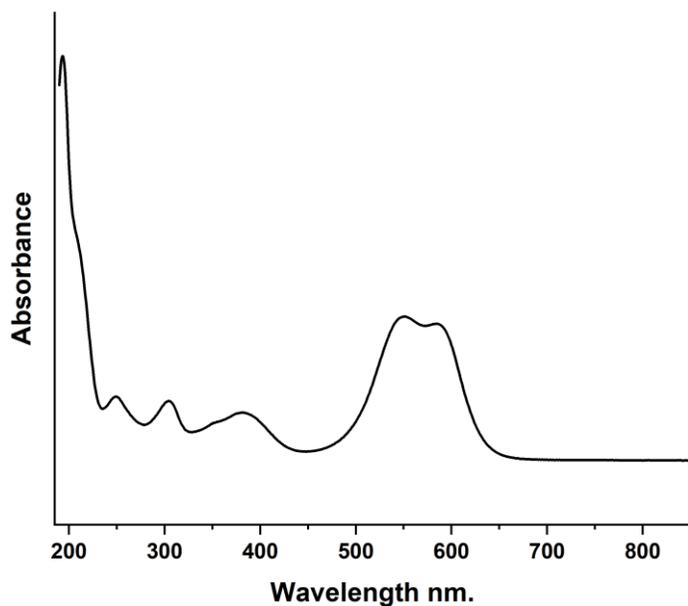


UV-Vis

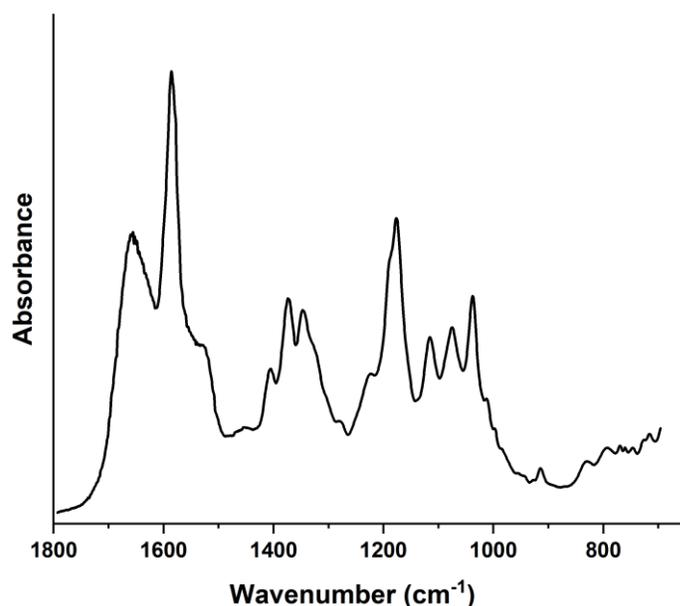


μ-FTIR

Figure S1.36 Violet

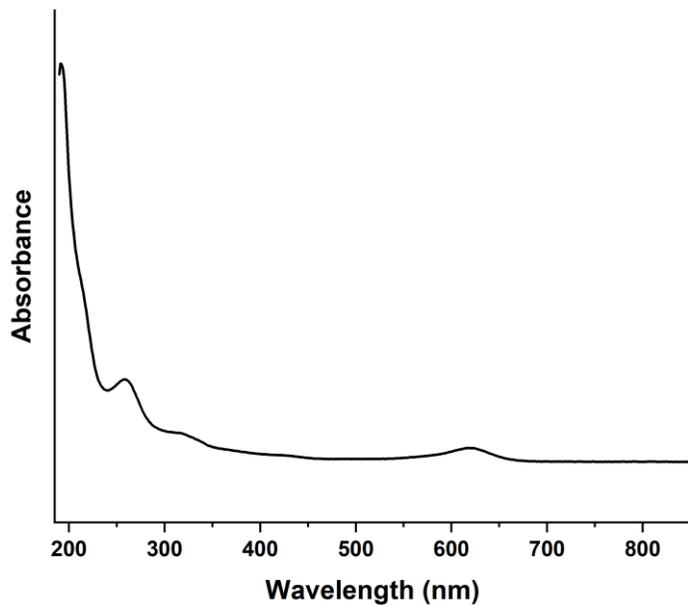


UV-Vis

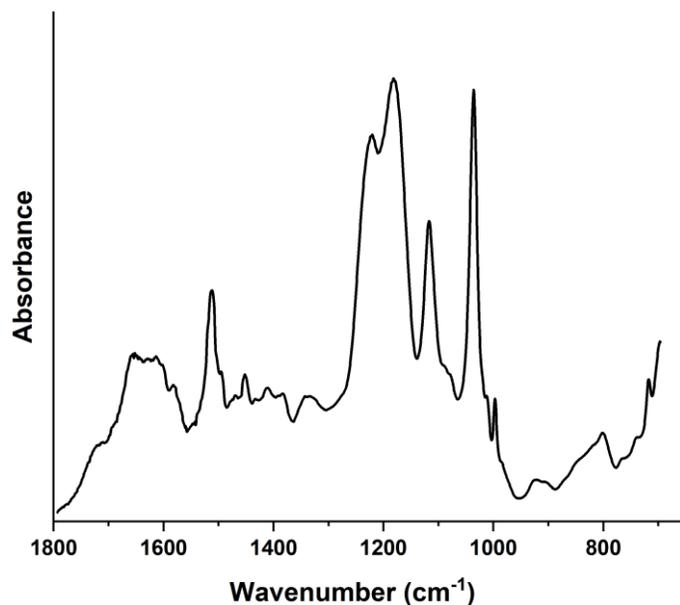


μ-FTIR

Figure S1.37 Viridian

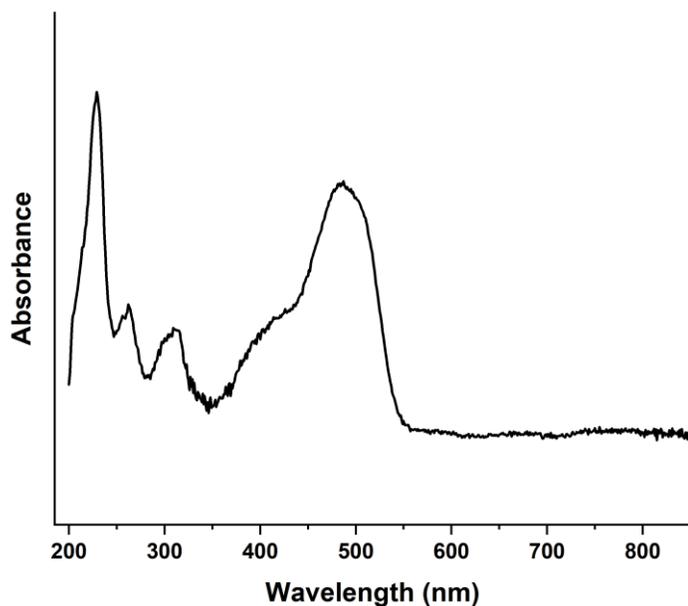


UV-Vis

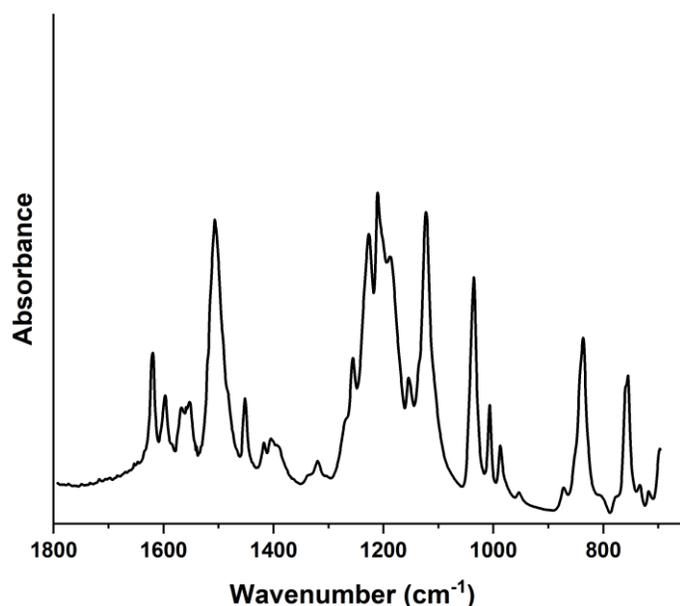


μ-FTIR

Figure S1.38 Yellow Ochre



UV-Vis



μ-FTIR

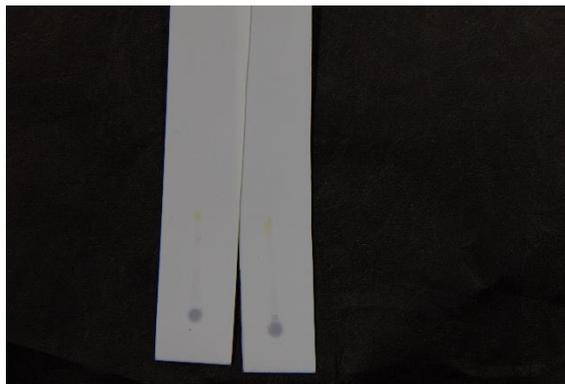
# Figure S2. TLC Plates developed for TLC-SERS



**Beige**



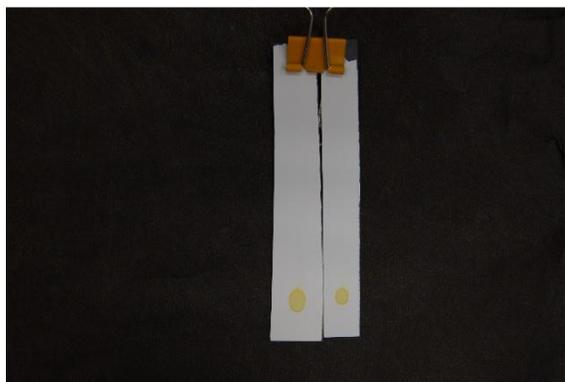
**Black**



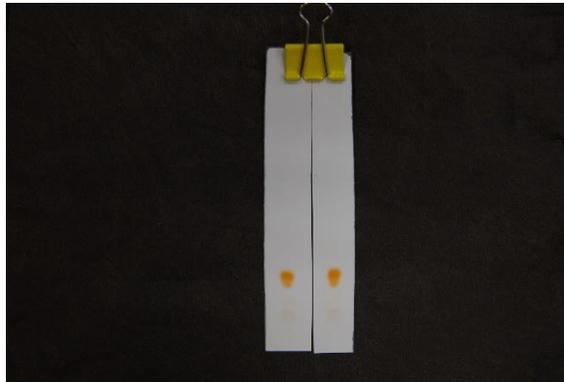
**Bluish Black**



**Burnt Sienna**

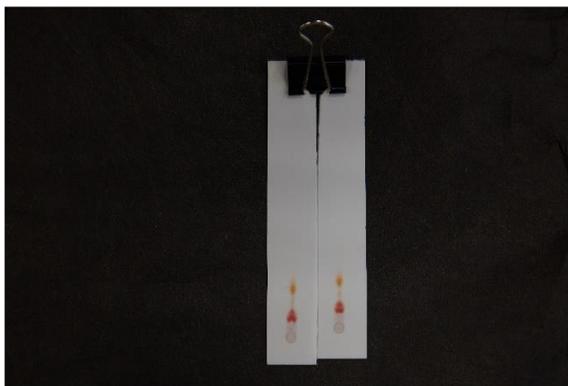


**Cadmium**

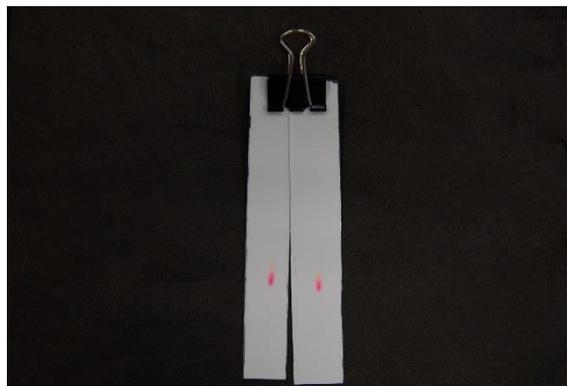


**Cadmium Orange**

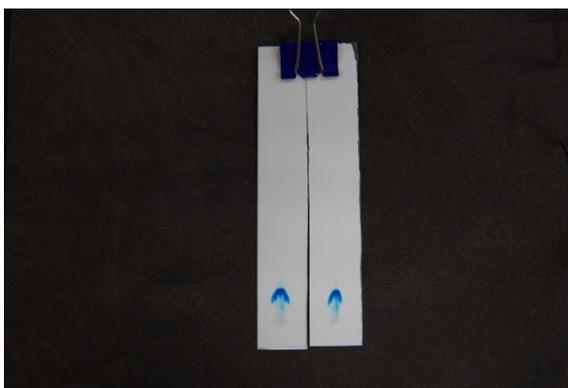
## Figure S2. TLC Plates developed for TLC-SERS



**Carmine**



**Cerise**



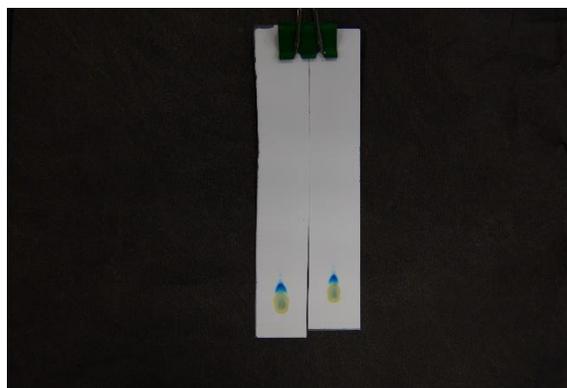
**Cerulean**



**Chrome Yellow**



**Dark Gray**



**Emerald**

## Figure S2. TLC Plates developed for TLC-SERS



**Hooker's Green**



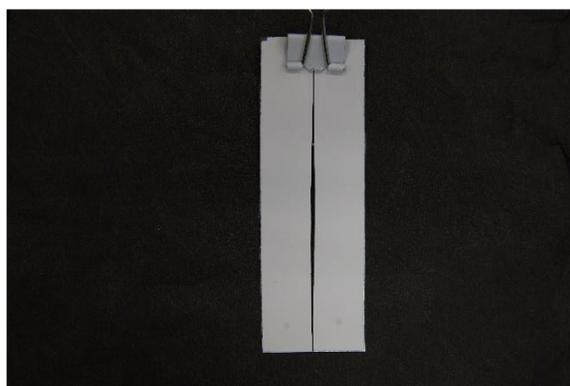
**Lake**



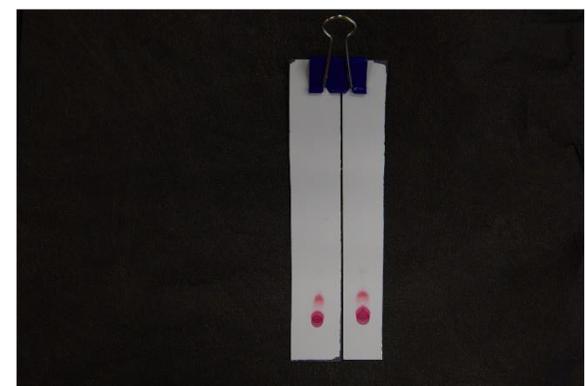
**Lemon Yellow**



**Light Brown**

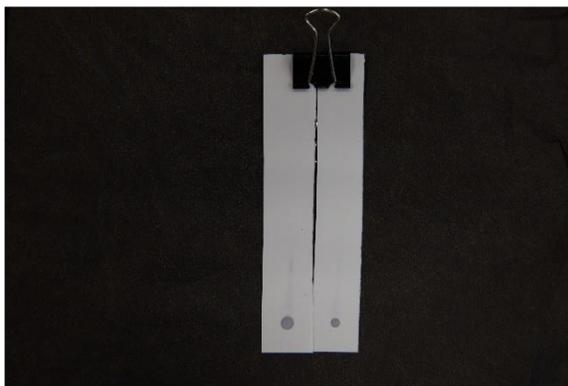


**Light Gray**



**Magenta**

## Figure S2. TLC Plates developed for TLC-SERS



Medium Gray



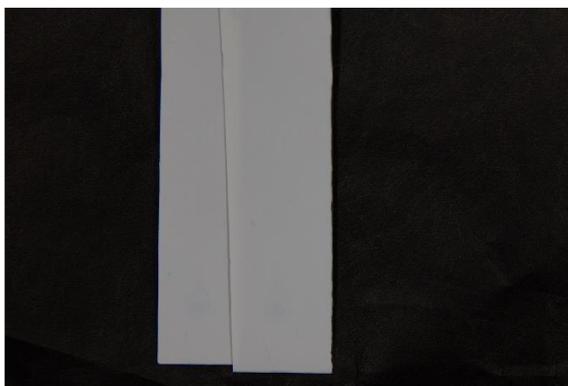
Nile Green



Olive Green



Orange

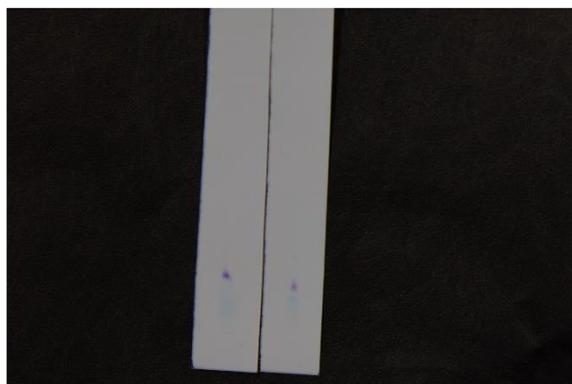


Payne's Gray



Prussian Blue

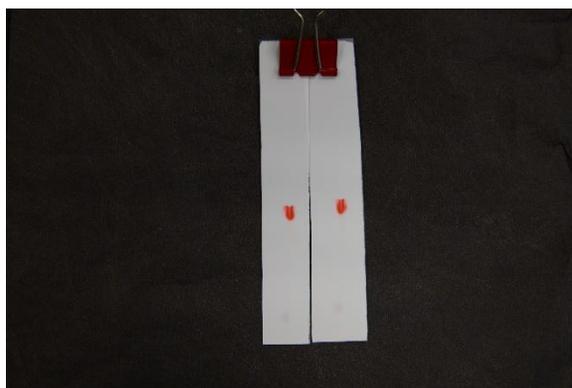
## Figure S2. TLC Plates developed for TLC-SERS



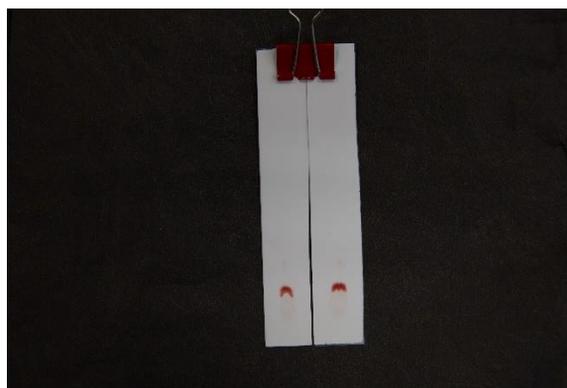
Purple



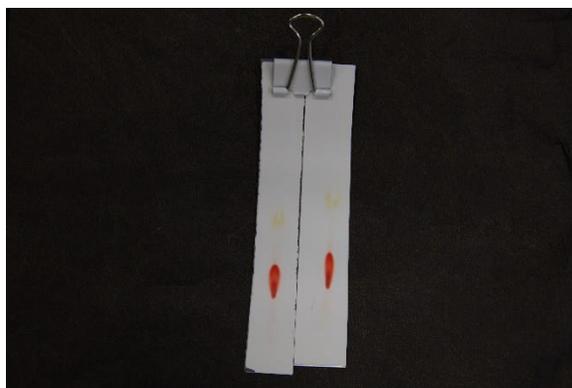
Reddish Brown



Rose Carthame



Rose Madder

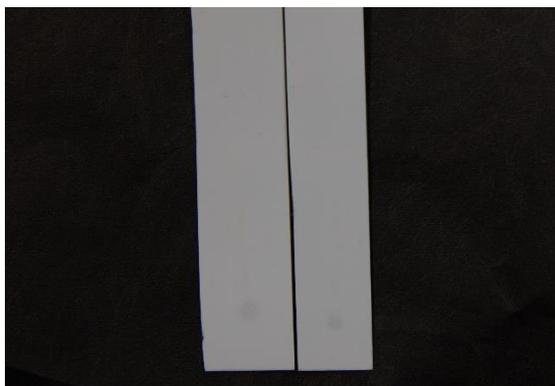


Scarlet

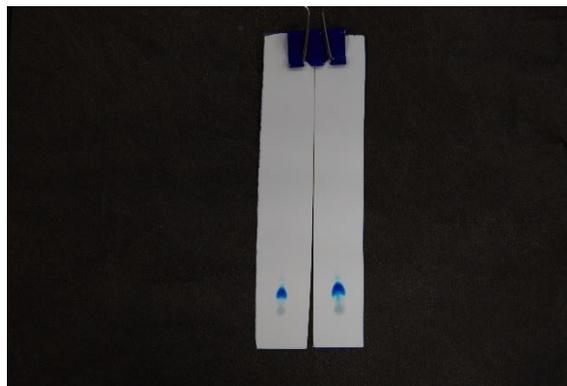


Sepia

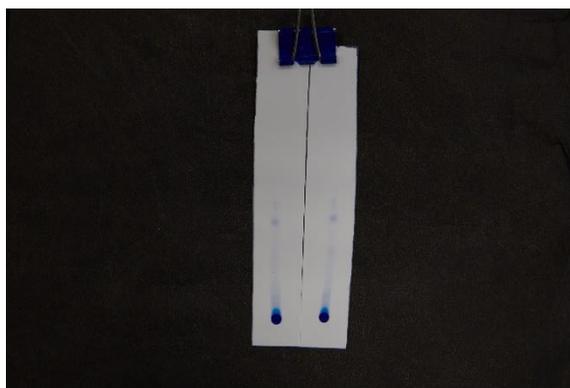
# Figure S2. TLC Plates developed for TLC-SERS



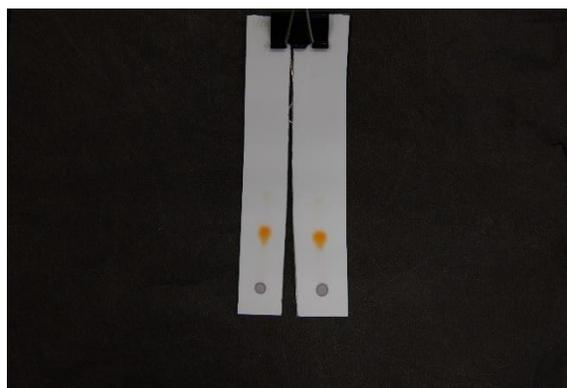
Stone Gray



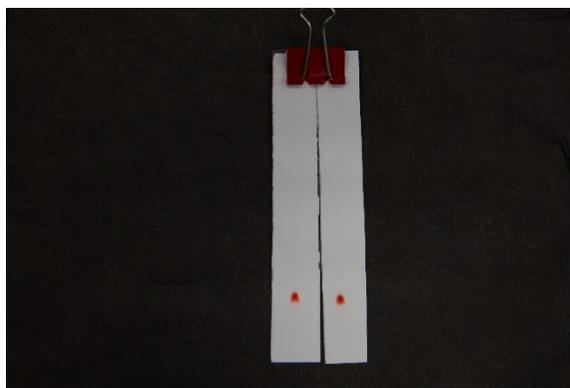
Turquoise



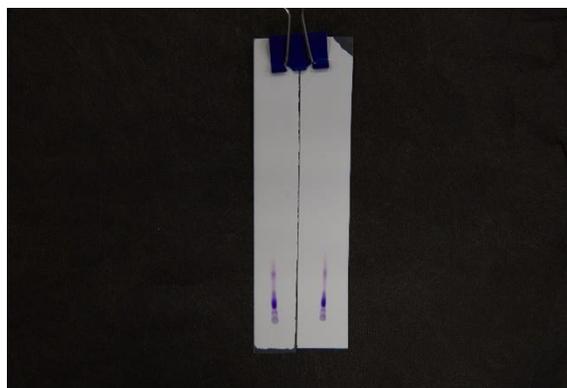
Ultramarine



Van Dyke Brown

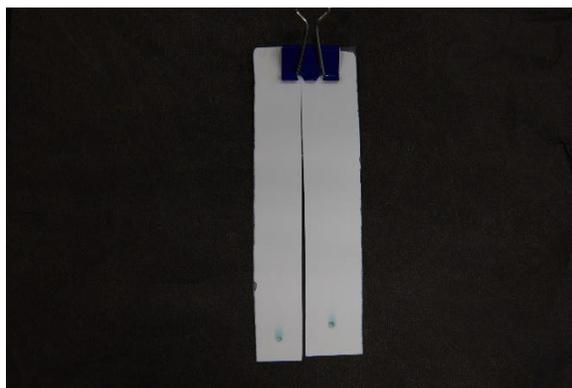


Vermillion



Violet

## Figure S2. TLC Plates developed for TLC-SERS



**Viridian**



**Yellow Ochre**

Figure S3.1 Acid Red 17

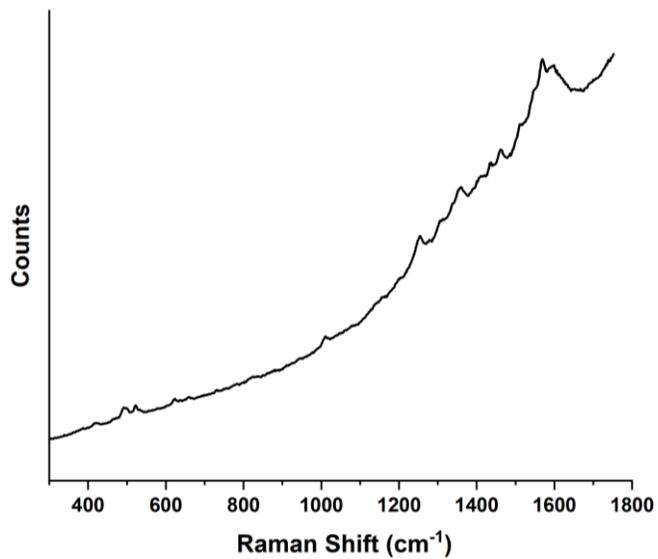


Figure S3.2 Acid Red 73

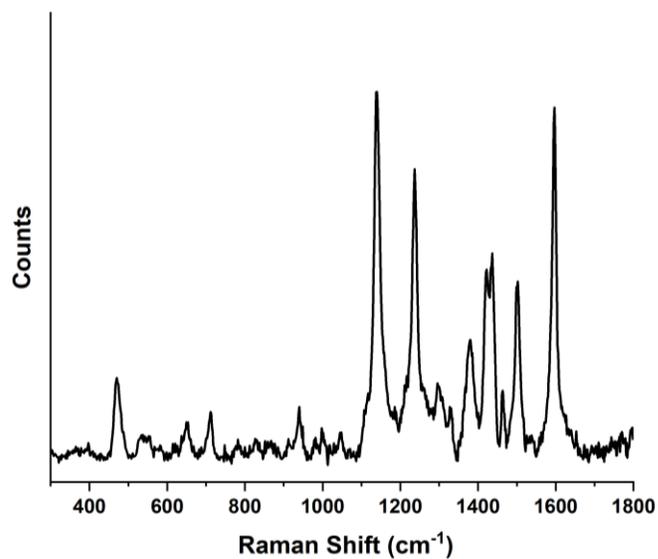


Figure S3.3 Acid Red 87

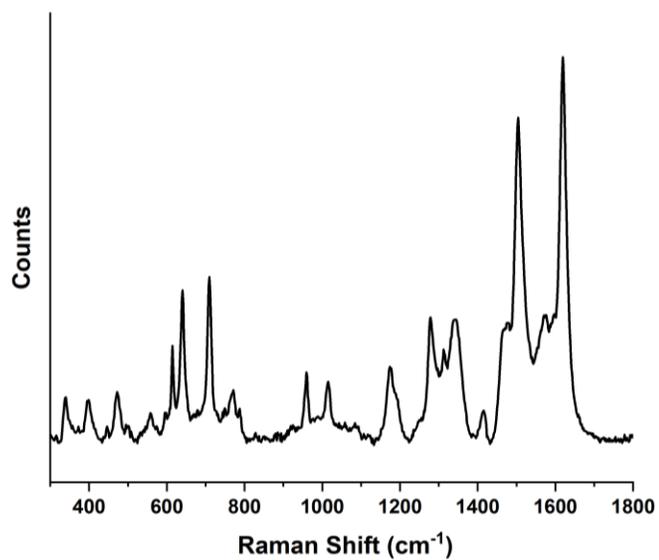


Figure S3.4 Acid Red 103

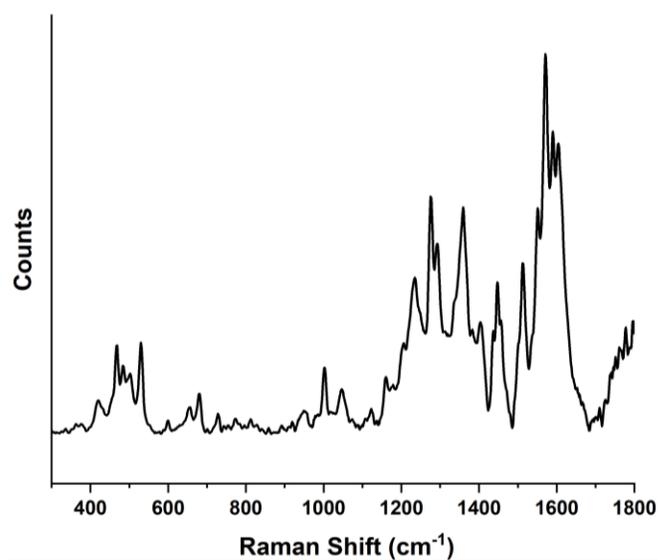


Figure S3.5 Basic Red 1

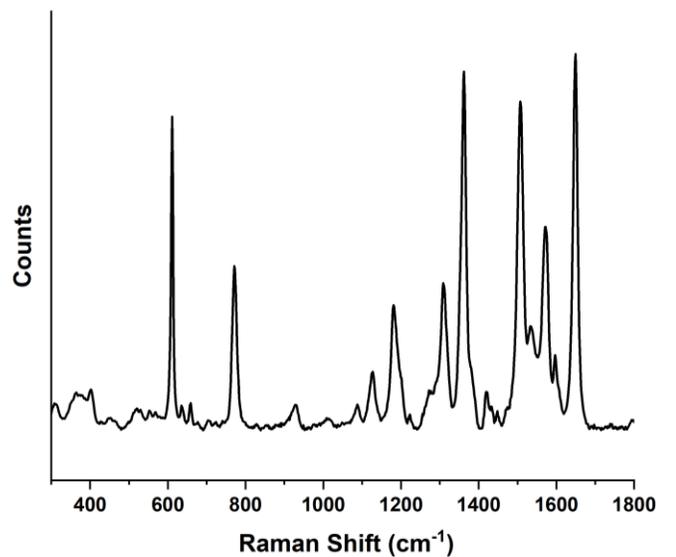


Figure S3.6 Acid Orange 7

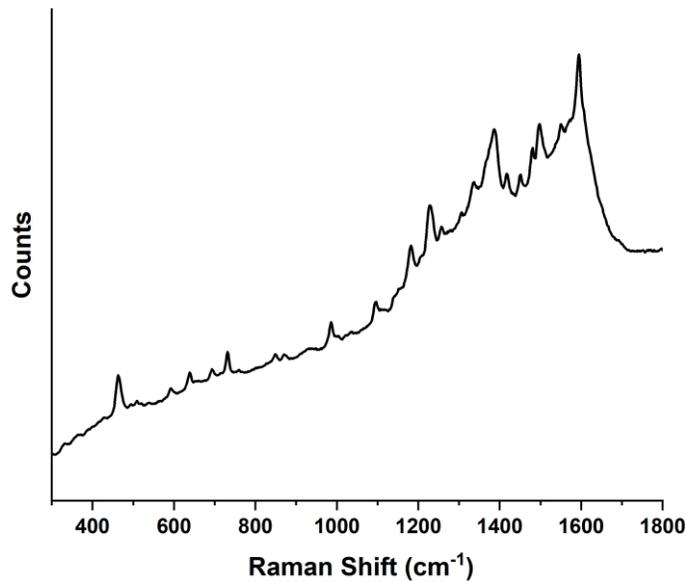


Figure S3.7 Acid Yellow 1 (?)

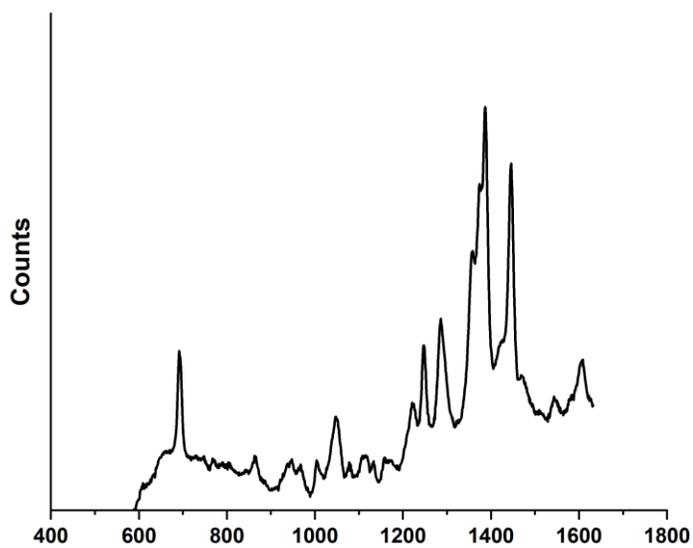


Figure S3.8 Acid Yellow 23

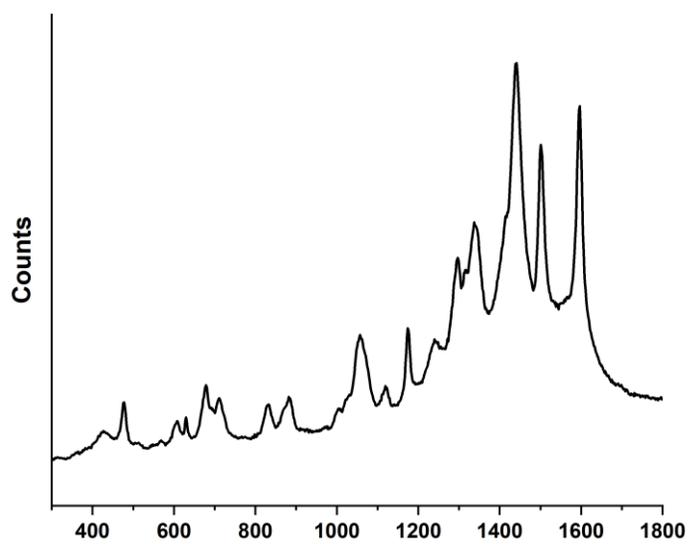


Figure S3.9 Acid Green 1

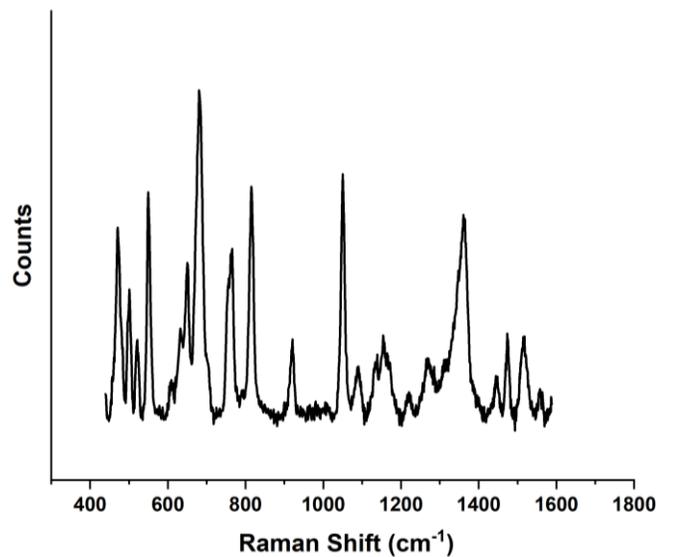


Figure S3.10 Basic Green 4

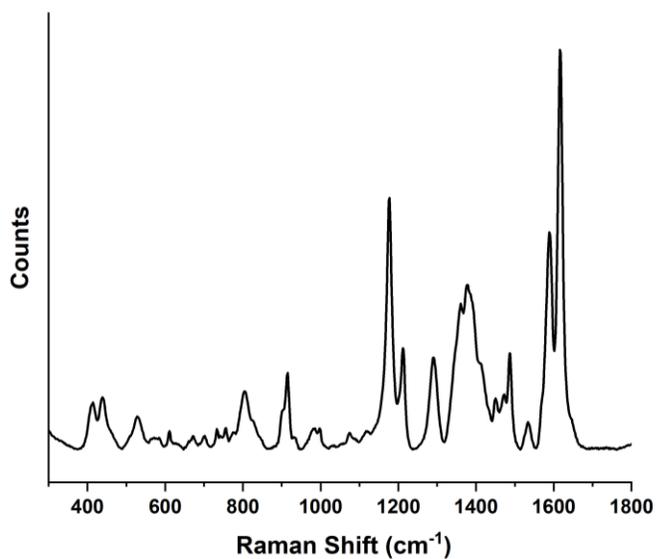


Figure S3.11 Acid Blue 3

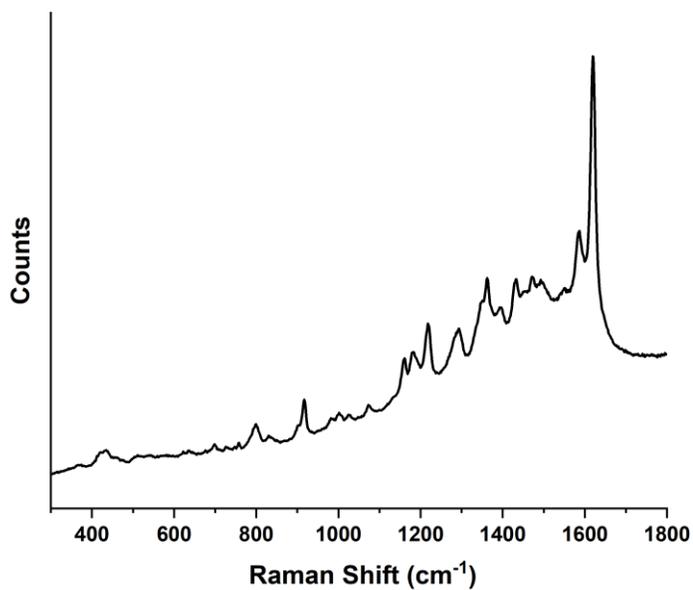


Figure S3.12 Acid Blue 93

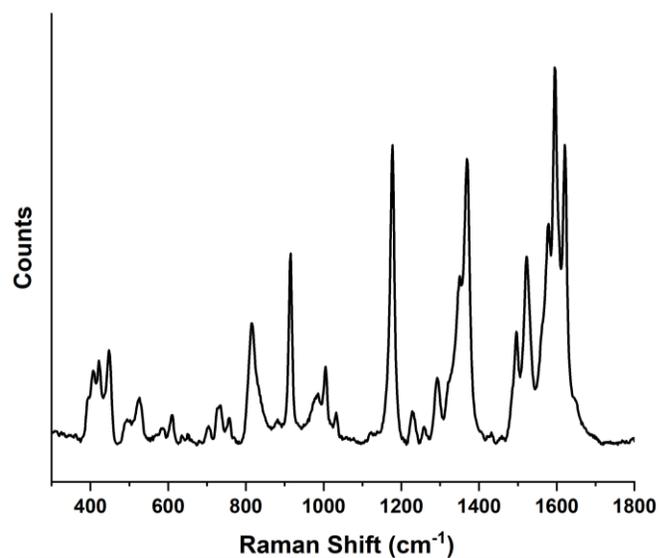


Figure S3.13 Basic Violet 3

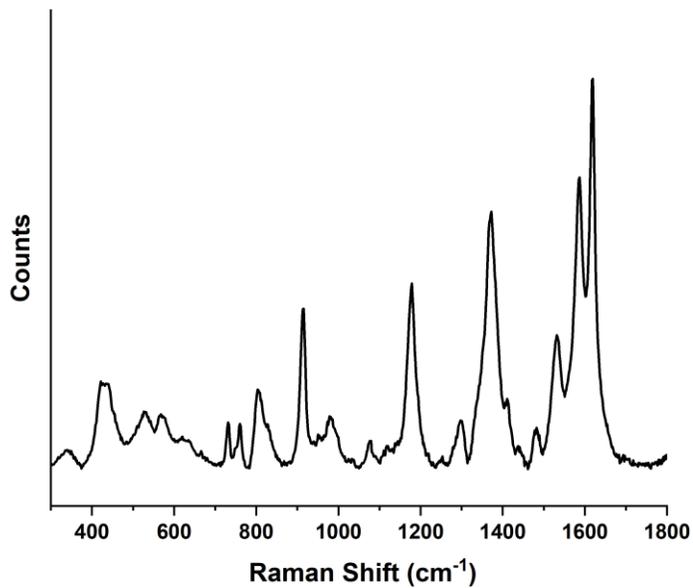


Figure S3.14 Basic Violet 10

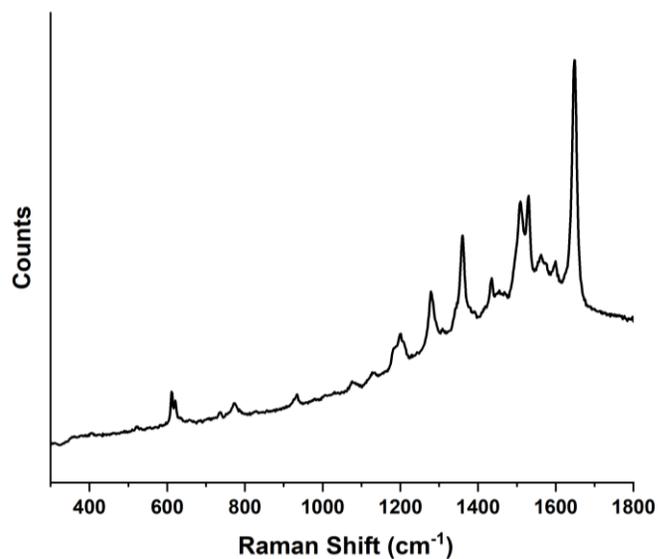


Figure S3.15 Basic Violet 17

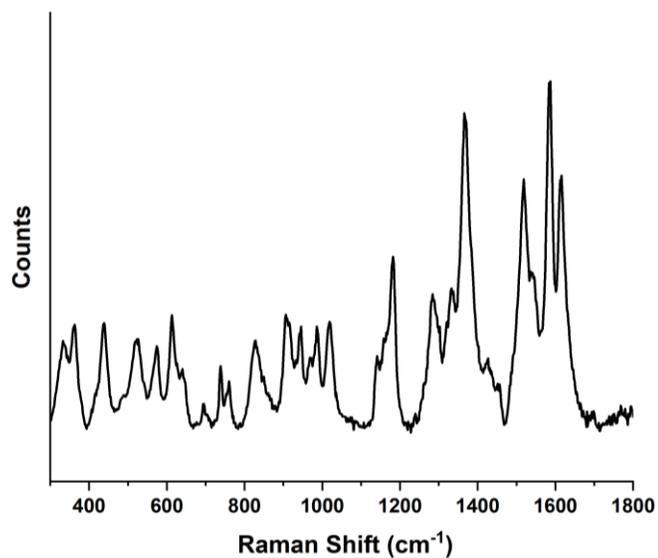
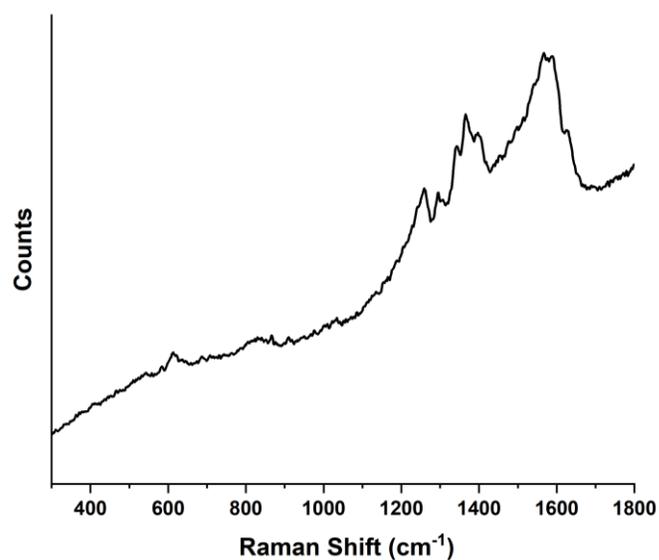
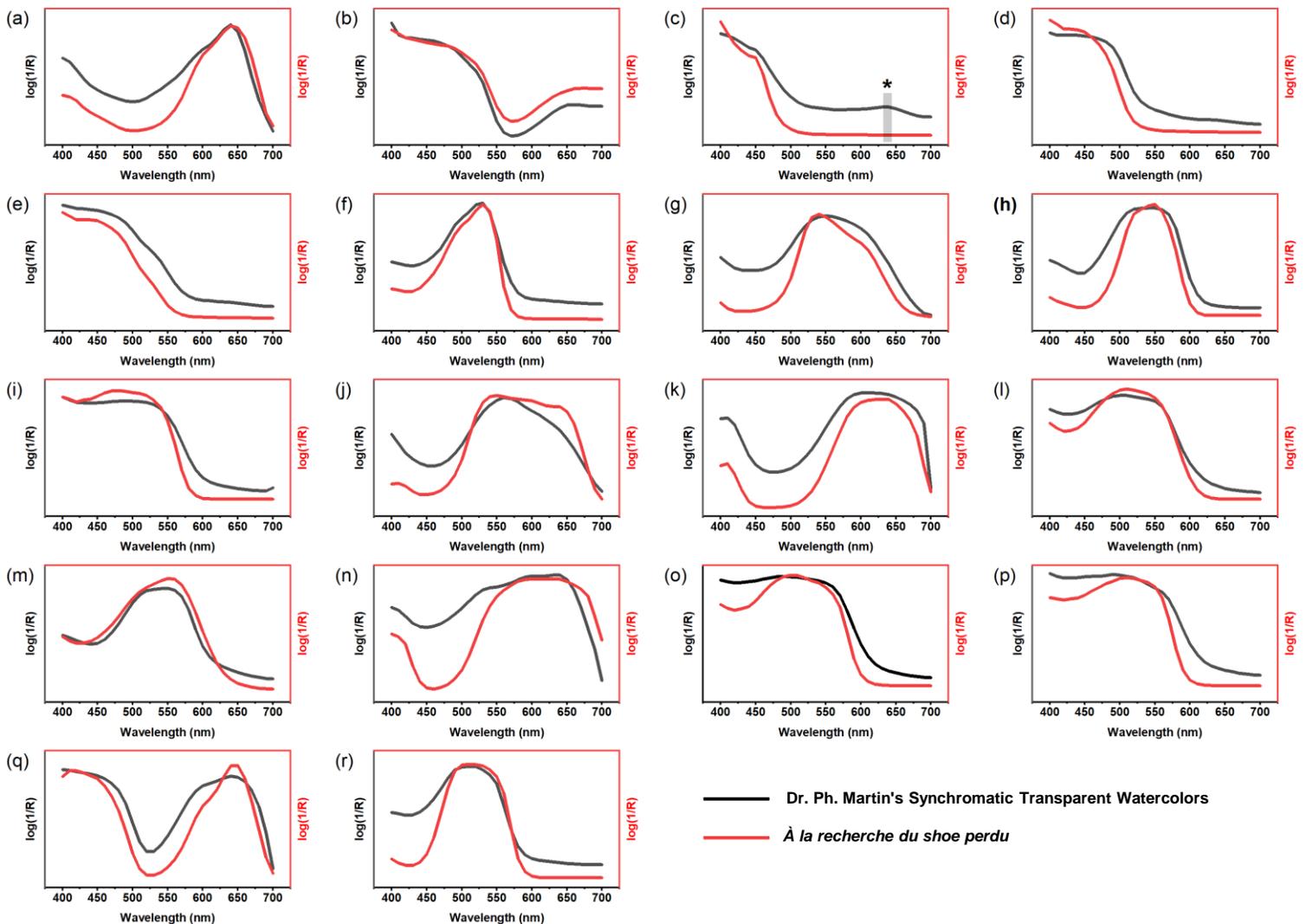


Figure S3.16 Acid Black 2



# Figure S4. Dr. Ph. Martin's Synchromatic Transparent Watercolors used in *À la recherche du shoe perdu* (MoMA) by reflectance spectrophotometry



Dr. Ph. Martin's Synchromatic Transparent Watercolors

*À la recherche du shoe perdu* (Plate Numbers)

Label	Watercolor Name	Plate Number
a	Viridian	1
b	Olive Green	13
c	Lemon yellow	12
d	Cadmium	17
e	Chrome Yellow	13
f	Rose Carthame	3
g	Violet	15
h	Cerise	15
i	Orange	11
j	Purple	17
k	Cerulean Blue	7
l	Carmine	11
m	Magenta	1
n	Prussian Blue	9
o	Scarlet	16
p	Vermilion	2
q	Nile Green	9
r	Lake	14