Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supporting Information Materials

The optimization of donor to acceptor feed ratios with the aim to get black-to-transmissive switching polymers based on isoindigo as the electron deficient moiety

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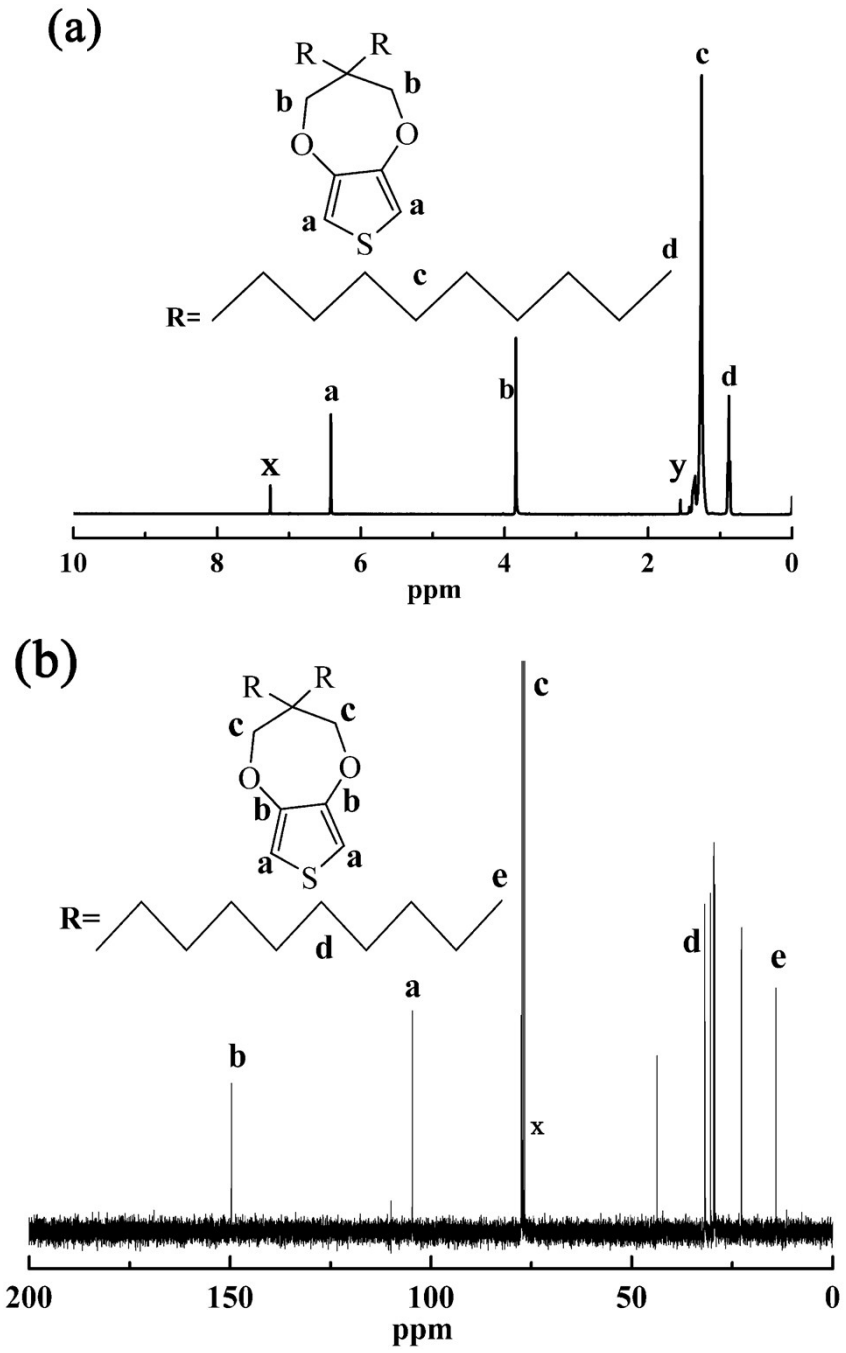


Figure S1. ^{1}H NMR spectrum of 3,3-Bis-decyl-3,4-dihydro-2H-thieno[3,4-b] [1,4]dioxepine (a), $CDCl_3$ Solvent peak and water speak were marked by 'x', 'y' respectively, ^{13}C NMR spectrum of 3,3-Bis-decyl-3,4-dihydro- 2H-thieno[3,4-b][1,4]dioxepine (b), $CDCl_3$ Solvent peak were marked by 'x'.

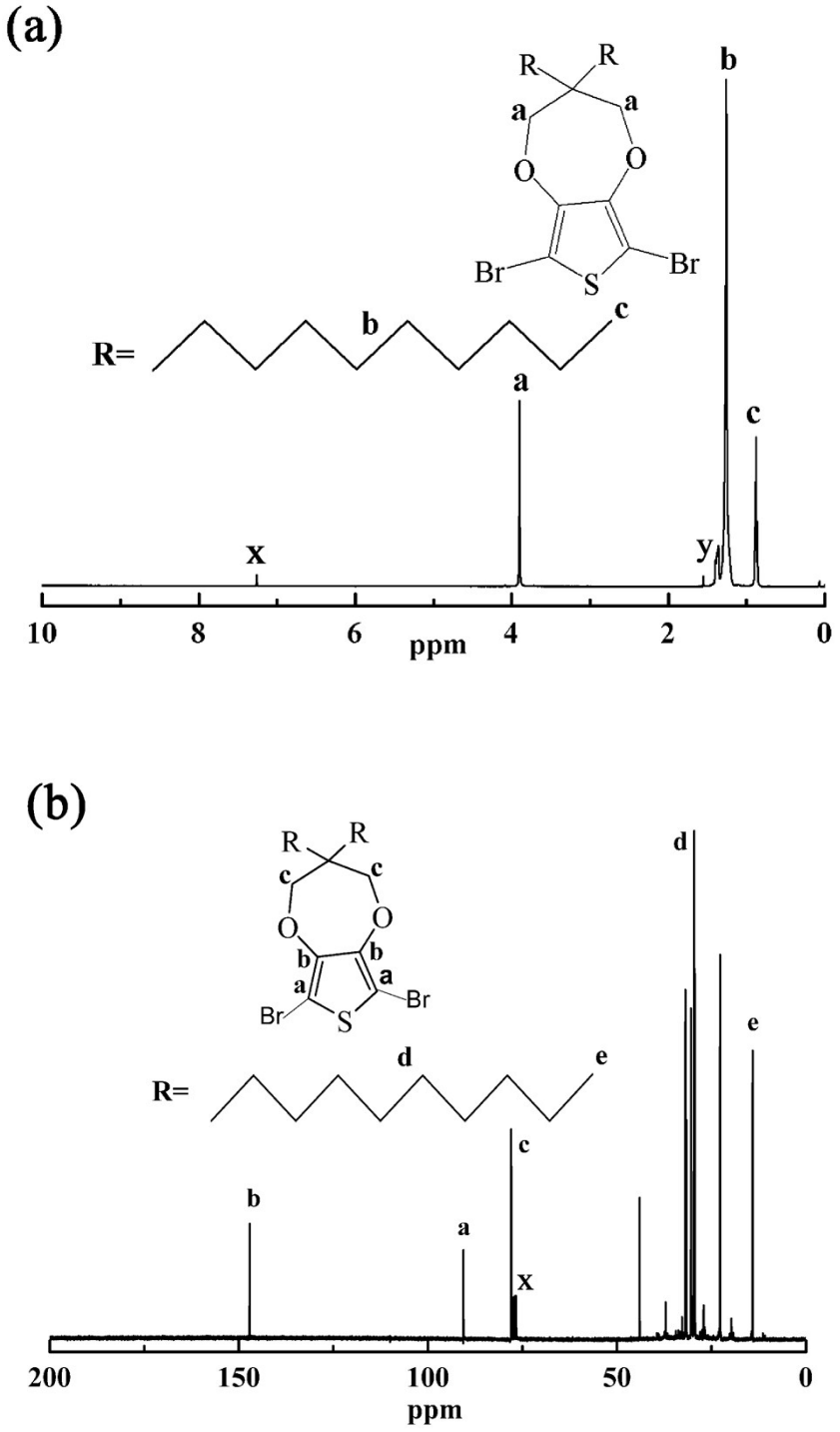
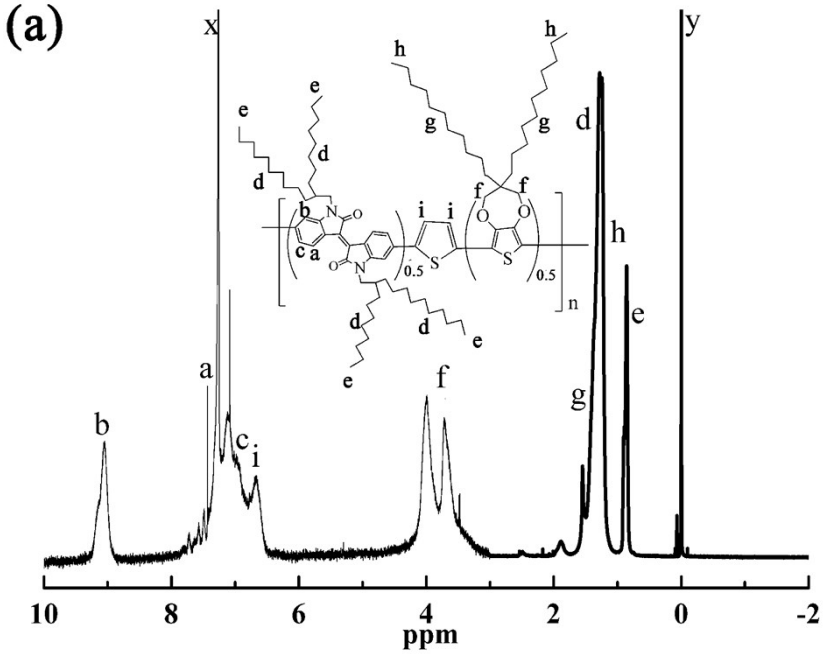
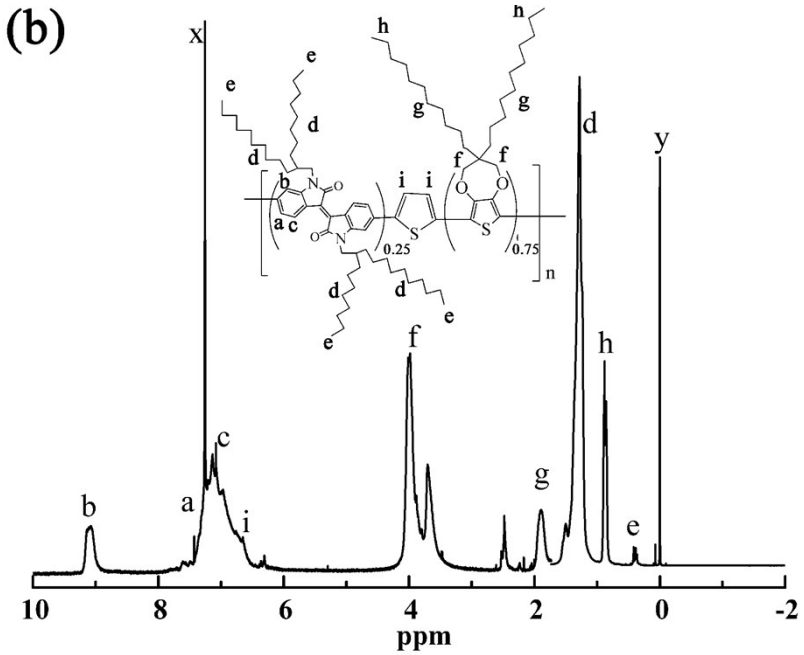


Figure S2. ^{1}H NMR spectrum of 6,8-Dibromo-3,3-bis-decyl-3,4-dihydro- 2H-thieno[3,4-b][1,4]dioxepine (a), $CHCl_3$ Solvent peak and water speak were marked by 'x', 'y' respectively, ^{13}C NMR spectrum of 6,8-Dibromo-3,3-bis-decyl- 3,4-dihydro-2H-thieno[3,4-b][1,4]dioxepine (b), $CHCl_3$ Solvent peak were marked by 'x'.


(a)
x
y
a
b
c
i
d
e
f
g
h
10
8
6
4
2
0
-2
ppm


(b)
x
y
a
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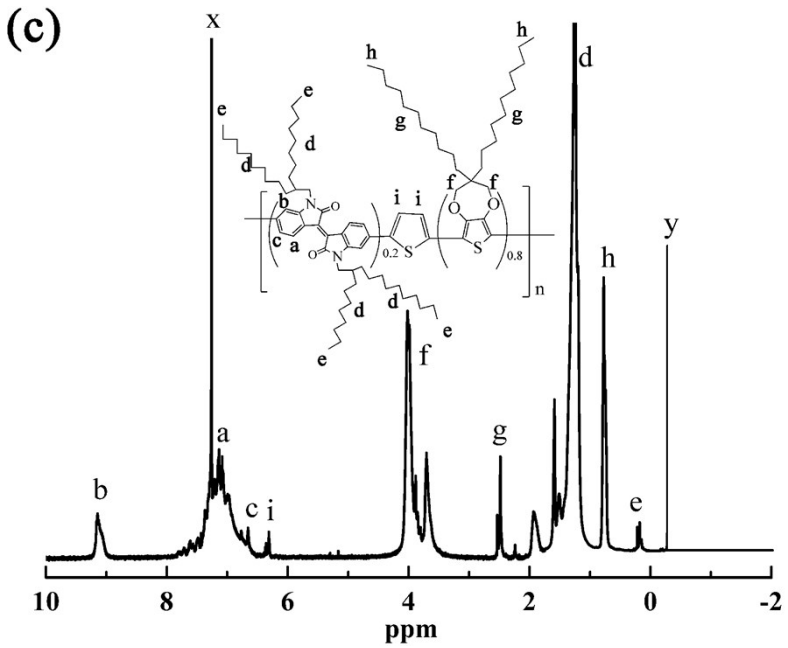
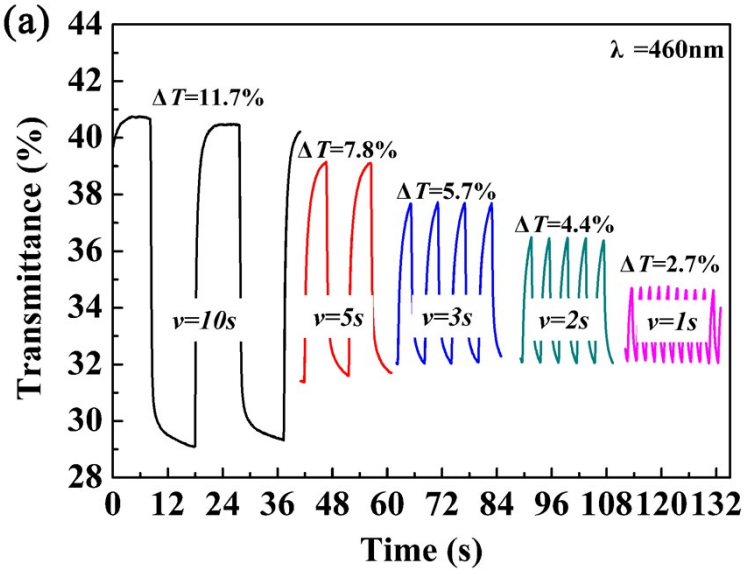


Figure S3. ^{1}H NMR spectrum of **P1(a), P2(b), P3(c),** $CHCl_3$ Solvent and tetramethylsilane peaks were marked by 'x', 'y' respectively.



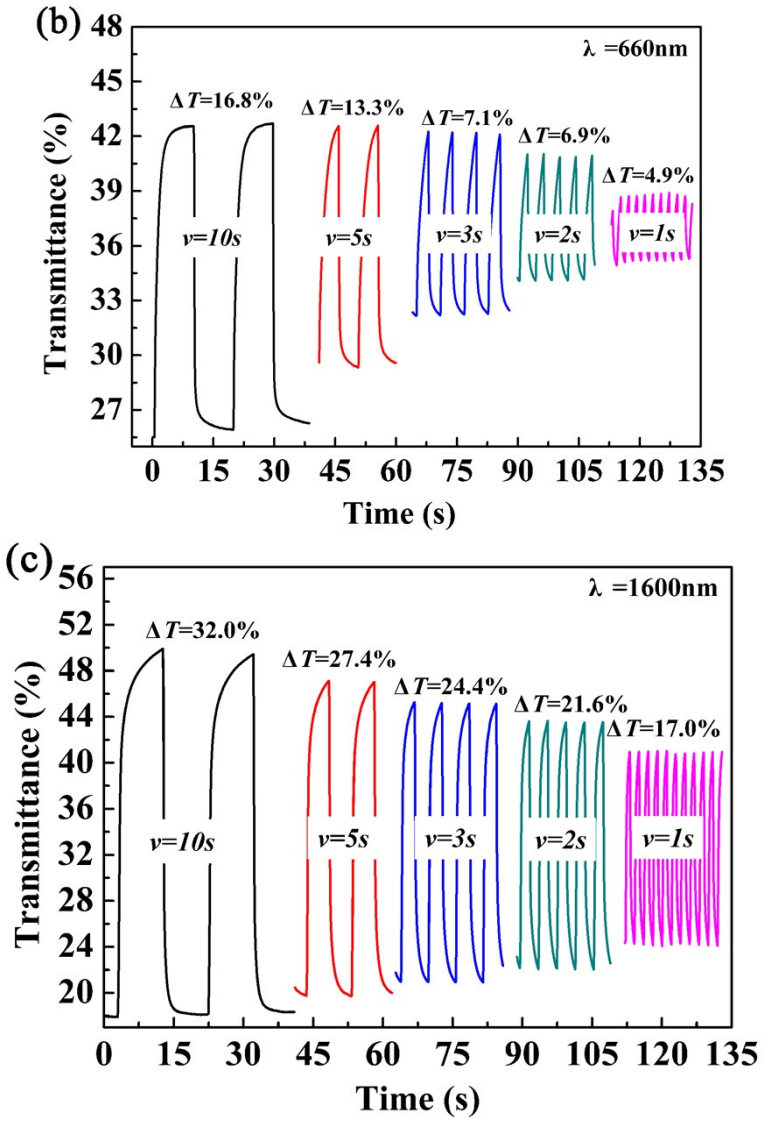


Figure S4. Electrochromic switching of P1(a, b, c), with an interval of 10 s, 5 s, 3 s, 2 s, 1s.

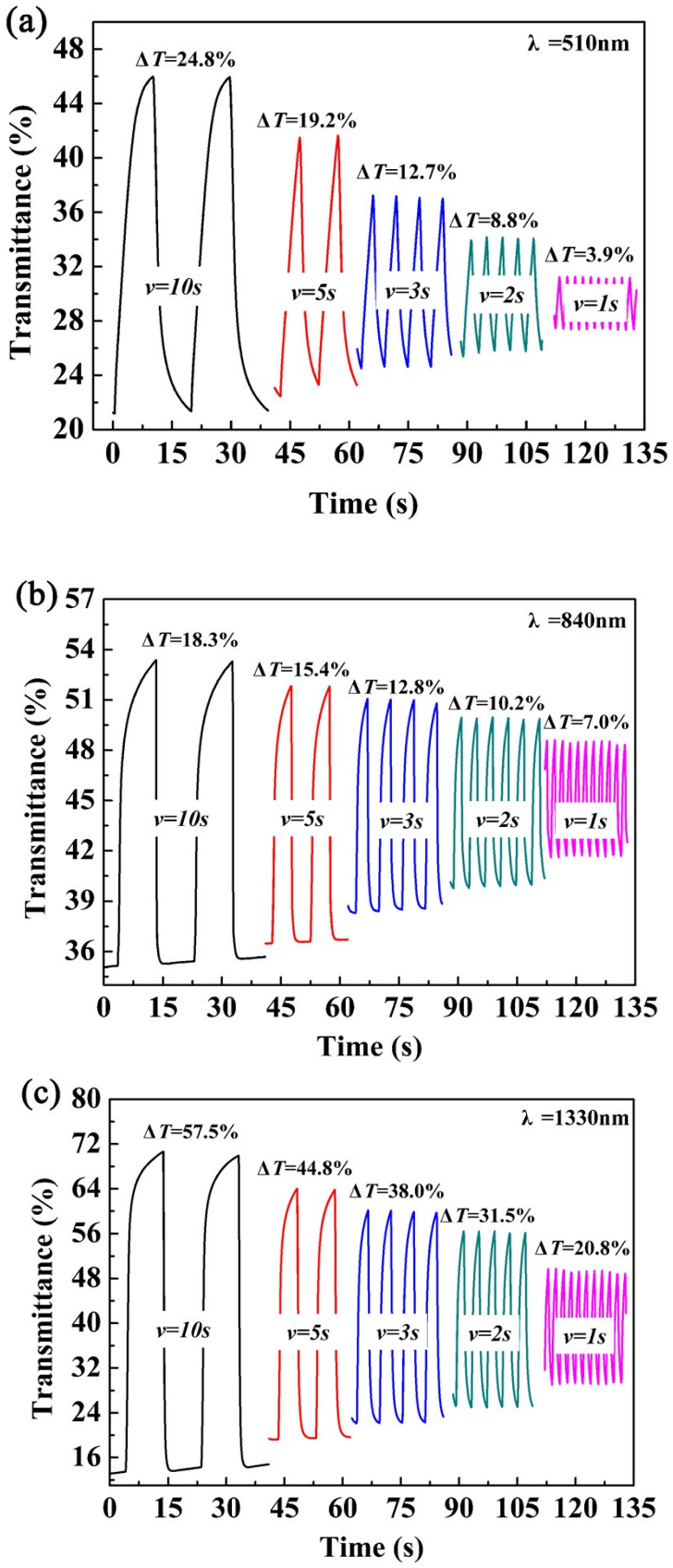


Figure S5. Electrochromic switching of P3 (a, b, c), with an interval of 10 s, 5 s, 3 s, 2 s, 1s.

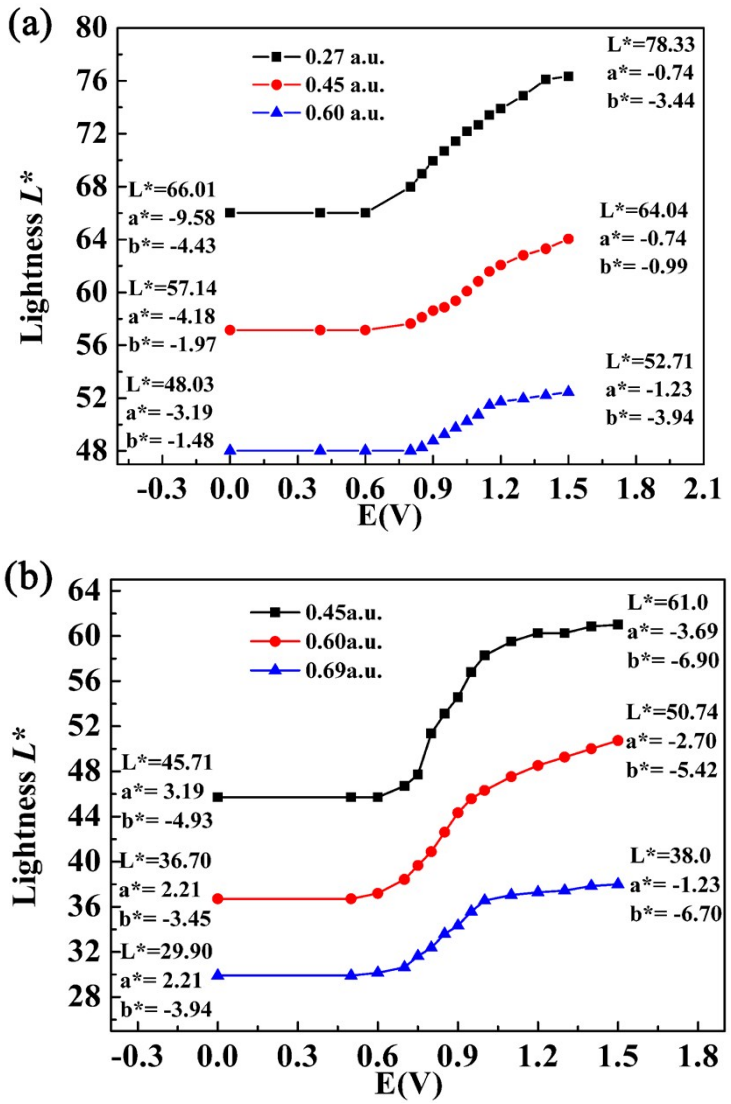


Figure S6. The L^* a^*b^* value of P1 (a), P3(b) with applied voltage from 0 V to 1.5 V.