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## ABBREVIATIONS

$\eta_{EL}$	=	Electroluminescence quantum efficiency
$\eta_{PL}$	=	Photoluminescence quantum efficiency
$\Delta E$	=	Excitation energy
$f$	=	Oscillator strength
AM1	=	Semiempirical Austin Model 1
B3LYP	=	Becke 's three parameter hybrid functional using the LYP Correlation functional
CASPT2	=	Second-order perturbation theory
CASSCF	=	Complete active space self-consistent field
CC	=	Couple Cluster
CCSD	=	Singles and doubles couple cluster
CIS	=	Singles configuration interaction
CISD	=	Singles and doubles configuration interaction
CISDT	=	Singles, doubles and triples configuration interaction
CISDTQ	=	Singles, doubles, triples and quadruples configuration Interaction
DSC	=	Differential scanning calorimetry
CSF	=	Configurational state Functions
CV	=	Cyclic voltammetry
DFT	=	Density functional theory
$E_g$	=	Energy gap
EA	=	Electron affinity
EFPy	=	2-pyridine-(9,9'-diethylfluorene)
(EFPy) <sub>n</sub>	=	Poly(2,5-pyridine- <i>alt</i> -(9,9' diethylfluorene))
EHT	=	Extended Hückel theory
EL	=	Electroluminescence
EEL	=	Electron energy loss
F	=	Fluorene
(FPy) <sub>n</sub>	=	Oligo[2,7-(fluorene)-co- <i>alt</i> -2,5-pyridine] <sub>n</sub>

GPC	=	Gel permeation chromatography
HF	=	Hartree Fock theory
HOMO	=	Highest occupied molecular orbital
INDO/s	=	Intermediate neglect of differential overlap
IP	=	Ionization potential
LEPs	=	Light-emitting polymers
LEDs	=	Light-emitting diodes
LUMO	=	Lowest unoccupied molecular orbital
MRCI	=	Multireference configuration interaction
MO	=	Molecular orbital
OLED	=	Organic light emitting diode
PBF	=	Poly(2,7-borfluorene)
PC	=	Polycarbozole
PF	=	Polyfluorene
PFO	=	Poly(9,9-dioctylfluorene)
PFs	=	Polyfluorene derivatives
PL	=	Photoluminescence
PLEDs	=	Polymer light-emitting diodes
(PEFPy)	=	Poly[2,7-(9,9-diethylfluorene)-co- <i>alt</i> -2,5-pyridine]
(POFPy)	=	Poly[2,7-(9,9-dioctylfluorene)-co- <i>alt</i> -2,5-pyridine]
PPP	=	Poly(para-phenylene)
PPV	=	Poly(para-phenylenevinylene)
Py	=	Pyridine
QE	=	Quantum efficiency
RPA	=	Random-phase approximation
RCIS	=	Restricted configuration interaction
RHF	=	Restricted Hartree-Fock
S <sub>0</sub>	=	Ground state
S <sub>1</sub>	=	First excited state
S <sub>2</sub>	=	Second excited state
S <sub>3</sub>	=	Third excited state
SAC	=	Symmetry adapted cluster

SAC-CI	=	Symmetry adapted cluster-configuration interaction
SAC-CI SD-R	=	Symmetry adapted cluster configuration interaction single-double-R
TD-DFT	=	Time-dependent density functional theory
$T_g$	=	Glass temperature
UAM1	=	Spin-unrestricted Austin Model1
UPS	=	Ultraviolet photo electron spectroscopy
UZINDO	=	Spin-unrestricted Zerner 's Intermediate Neglect Differential Overlap
VUV	=	Vacuum ultraviolet spectroscopy
$\phi_w$	=	Work function
XPS	=	X-ray photoelectron spectroscopy
ZINDO	=	Zerner 's Intermediate Neglect Differential Overlap