ISSN 2321-807X
Volume 15 Number1
Journal of Advances in Chemistry

New Compounds Measured by Fluorescence Spectroscopy. Amino-Fluorene-Thiophene Derivatives to Be Proposed as Polarity Indicators.

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Supporting Information

Drying methods

To obtain the solvents in the purity necessary to carry the tests, they were purified or bought to not to have artefacts. All bought solvents are from Sigma-Aldich (Merck) and anhydrous. Dichloromethane was bought (≥99.8% purity), containing 40-150 ppm amylene as stabilizer. Tetrahydrofurane was dryed in a flask with sodium/benzofenone, and bottled in argon atmosphere with molecular sieves. Ethyl acetate was bought (99.8% purity). Dioxane was bought (99.8% purity). Acetone was bought (≥99.9% purity) for HPLC Plus, for HPLC, GC, and residue analysis, and bottled in argon atmosphere with molecular sieves. Acetonitrile was bought (99.8%, purity). N, N-dimethylformamide was bought (99.8% purity). Dimethyl sulfoxide was dryed in a flask with sodium hydride, and bottled in argon atmosphere with molecular sieves.

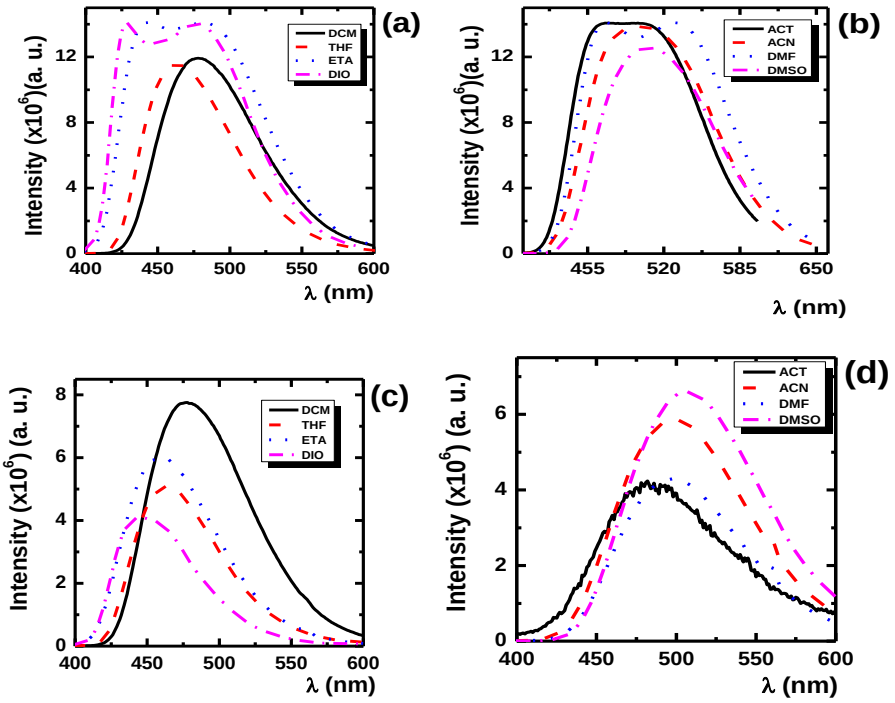

Figure S1. M6-2 emission in the assayed solvents, exciting at □max in (a) nonpolar solvents; (b) polar solvents. At □≠ □max in (c) nonpolar solvents; (d) polar solvents.

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Table S1. M6-2 maximum emission in solvents of different polarity, excited at different □.

Solvent	Solvent polarity index	λmax excitation (nm)	λmax emission (nm)	λexcitation≈λlamp (nm)	λmax emission (nm)
DCM	3.1	378	478		477
THF	4.0	377	463		462
ADE	4.4	378	442; 481		458
DIO	4.8	381	428; 477	280	446
ACT	5.1	380	472; 498		482
ACN	5.8	379	498		498
DMF	6.4	384	470; 530		498
DMSO	7.2	390	508		506

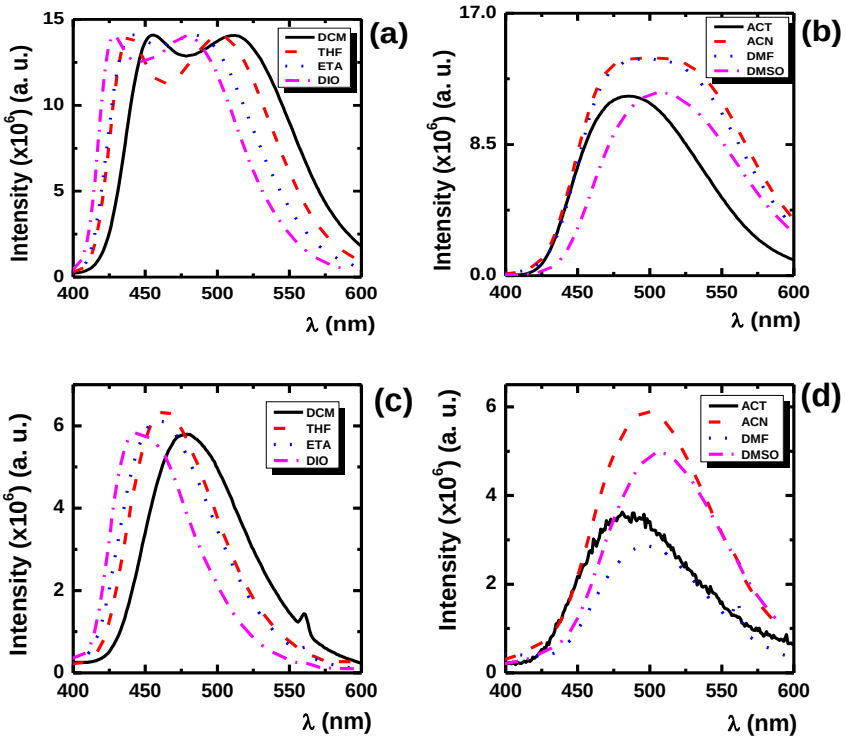

Figure S2. M6-3 emission in the assayed solvents, exciting at □max in (a) nonpolar solvents; (b) polar solvents. At □≠ □max in (c) nonpolar solvents; (d) polar solvents.

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Table S2. M6-3 maximum emission in solvents of different polarity, excited at different □.

Solvent	Solvent polarity index	λmax excitation (nm)	λmax emission (nm)	λexcitation ≈λlamp (nm)	λmax emission (nm)
DCM	3.1	383	455; 512		479
THF	4.0	381	439; 502		462
ADE	4.4	380	442; 483		459
DIO	4.8	381	428; 478	280	446
ACT	5.1	378	485		481
ACN	5.8	379	498		498
DMF	6.4	384	503		494
DMSO	7.2	383	485		507

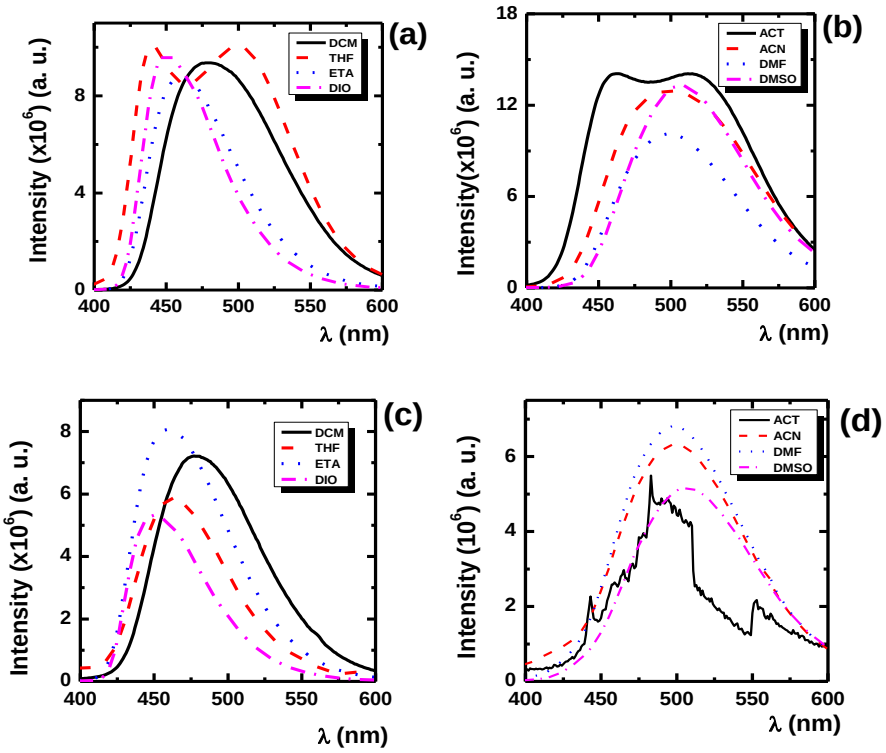

Figure S3. M6-4 emission in the assayed solvents, exciting at □max in (a) nonpolar solvents; (b) polar solvents. At □≠ □max in (c) nonpolar solvents; (d) polar solvents.

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Table S3. M6-4 maximum emission in solvents of different polarity, excited at different □.

Solvent	Solvent polarity index	λmax excitation (nm)	λmax emission (nm)	λexcitation ≈λlamp (nm)	λmax emission (nm)
DCM	3.1	382	478		477
THF	4.0	381	440; 500		465
ADE	4.4	374	459		460
DIO	4.8	371	450	280	450
ACT	5.1	380	463; 512		483
ACN	5.8	377	498		498
DMF	6.4	386	500		497
DMSO	7.2	391	509		507

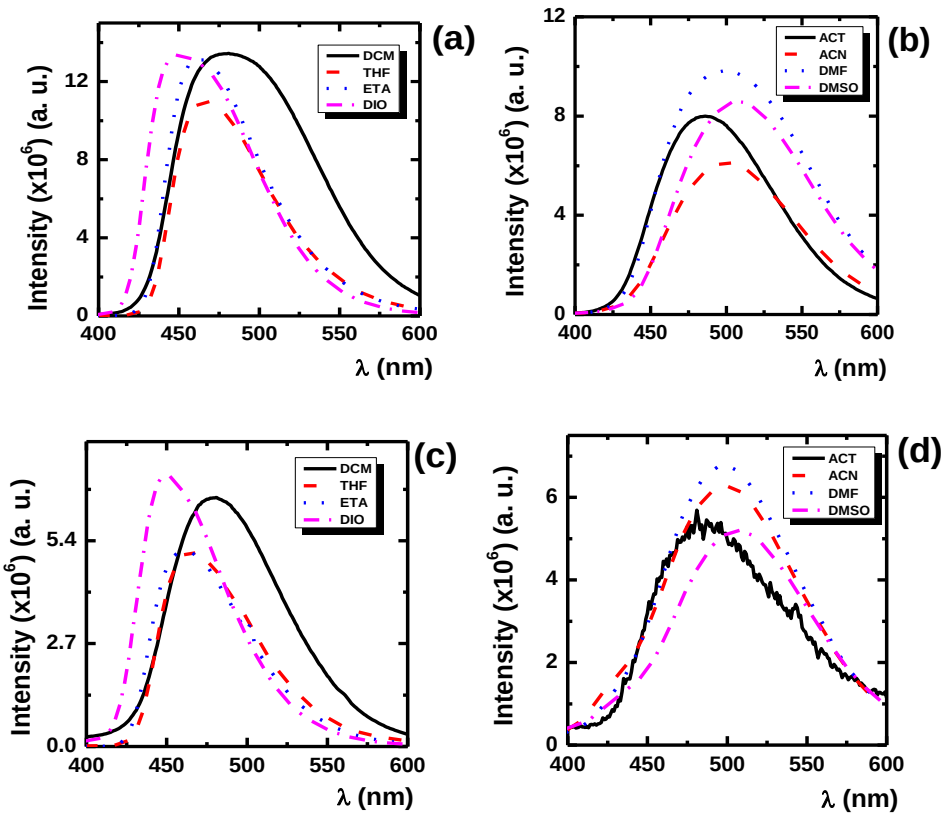

Figure S4. M6-5 emission in the assayed solvents, exciting at □max in (a) nonpolar solvents; (b) polar solvents. At □≠ □max in (c) nonpolar solvents; (d) polar solvents.

Table S4. M6-5 maximum emission in solvents of different polarity, excited at different □.

Solvent	Solvent polarity index	λmax excitation (nm)	λmax emission (nm)	λexcitation ≈λlamp (nm)	λmax emission (nm)
DCM	3.1	386	481		481
THF	4.0	375	466		466
ADE	4.4	377	463		461
DIO	4.8	379	451	280	450
ACT	5.1	374	486		481
ACN	5.8	384	501		498
DMF	6.4	384	498		499
DMSO	7.2	386	506		507

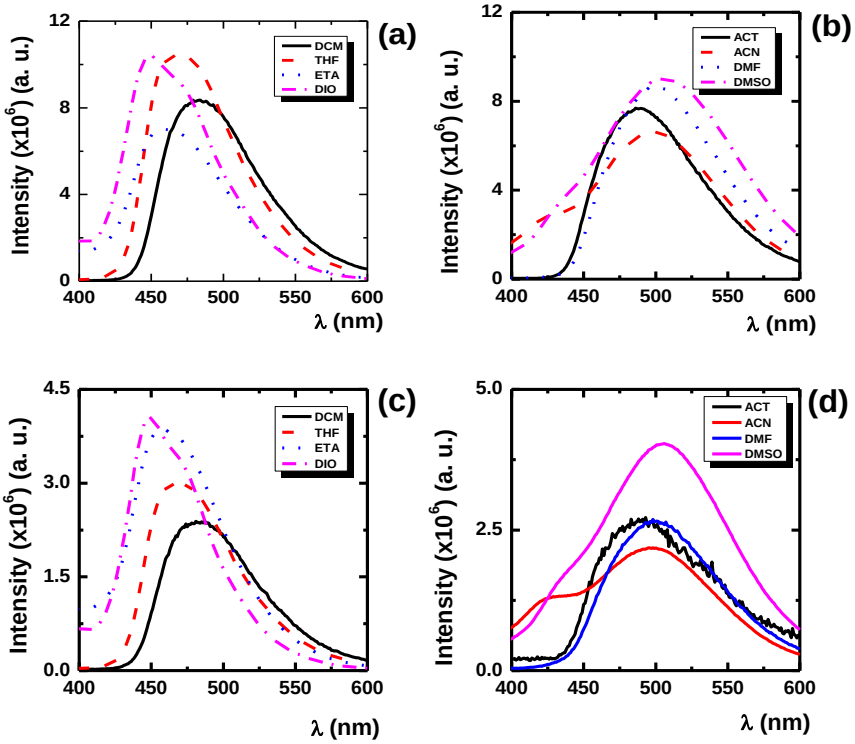

Figure S5. M6-6 emission in the assayed solvents, exciting at □max in (a) nonpolar solvents; (b) polar solvents. At □≠ □max in (c) nonpolar solvents; (d) polar solvents.

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Table S5. M6-6 maximum emission in solvents of different polarity, exciting at different □.

Solvent	Solvent polarity index	λmax excitation (nm)	λmax emission (nm)	λexcitation ≈λlamp (nm)	λmax emission (nm)
DCM	3.1	389	484		487
THF	4.0	376	471		466
ADE	4.4	347	460		457
DIO	4.8	343	449; 467	280	450; 468
ACT	5.1	371	486		493
ACN	5.8	350	498		428,498
DMF	6.4	364	499		498
DMSO	7.2	347	507		506

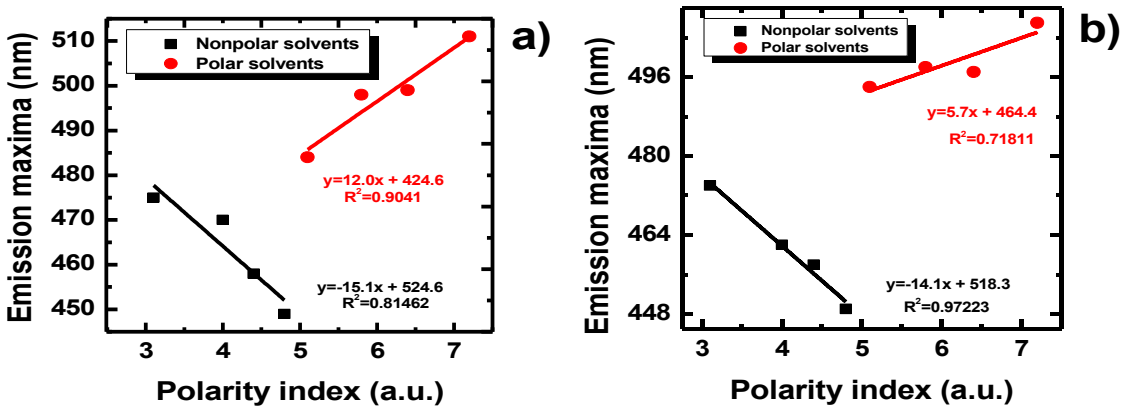

Figure S6. M6-1 polarity index vs. emission □max: (a) exciting atlmax; (b) exciting at □ ≠ □ max.

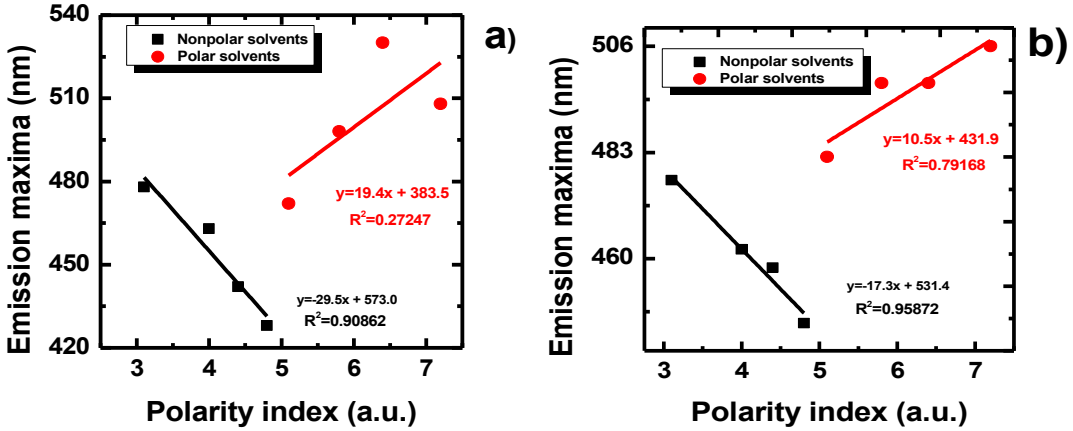

Figure S7. M6-2 polarity index vs. emission lmax: (a) exciting at □ max; (b) exciting at □ ≠ □ max.

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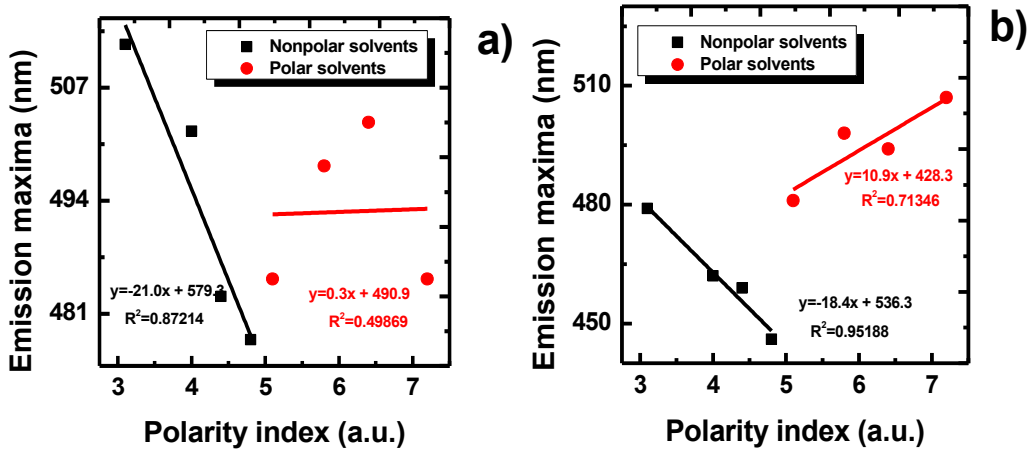

Figure S8. M6-3 polarity index vs. emission lmax: (a) exciting at □ max; (b) exciting at □ ≠ □ max.

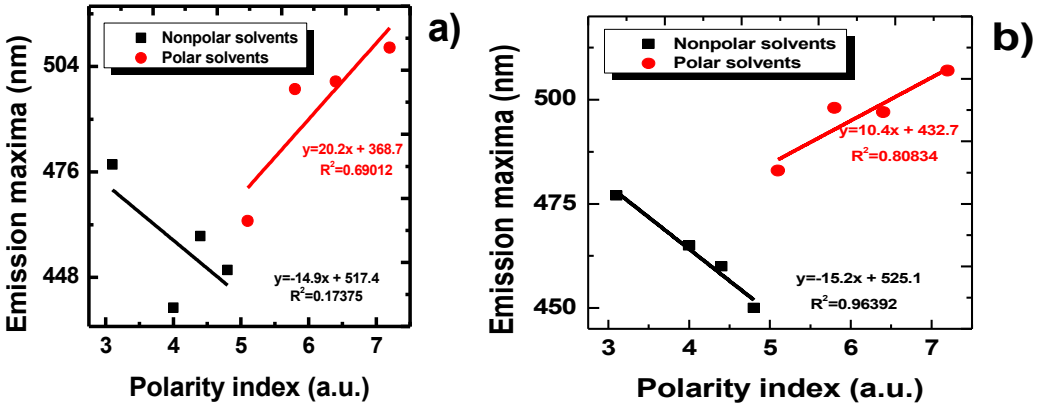

Figure S9. M6-4 polarity index vs. emission l max: (a) exciting at □ max; (b) exciting at □≠ □ max.

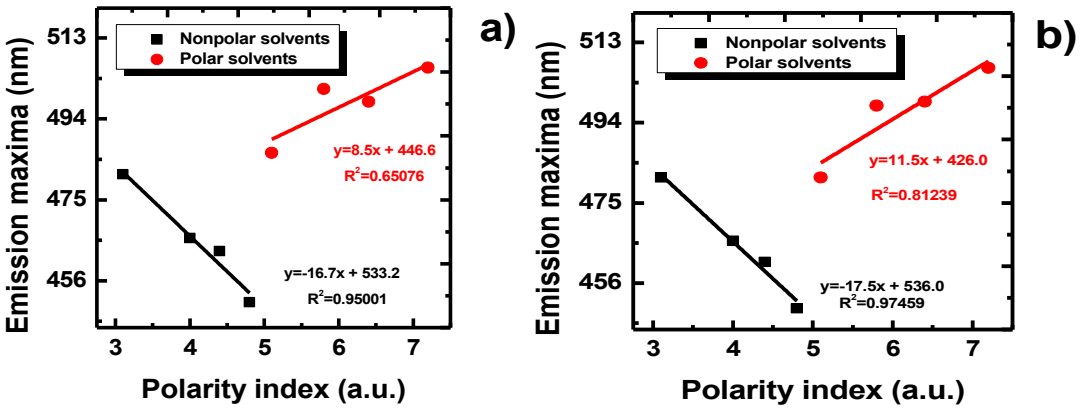

Figure S10. M6-5 polarity index vs. emission lmax: (a) exciting at □ max; (b) exciting at □ ≠ □ max.