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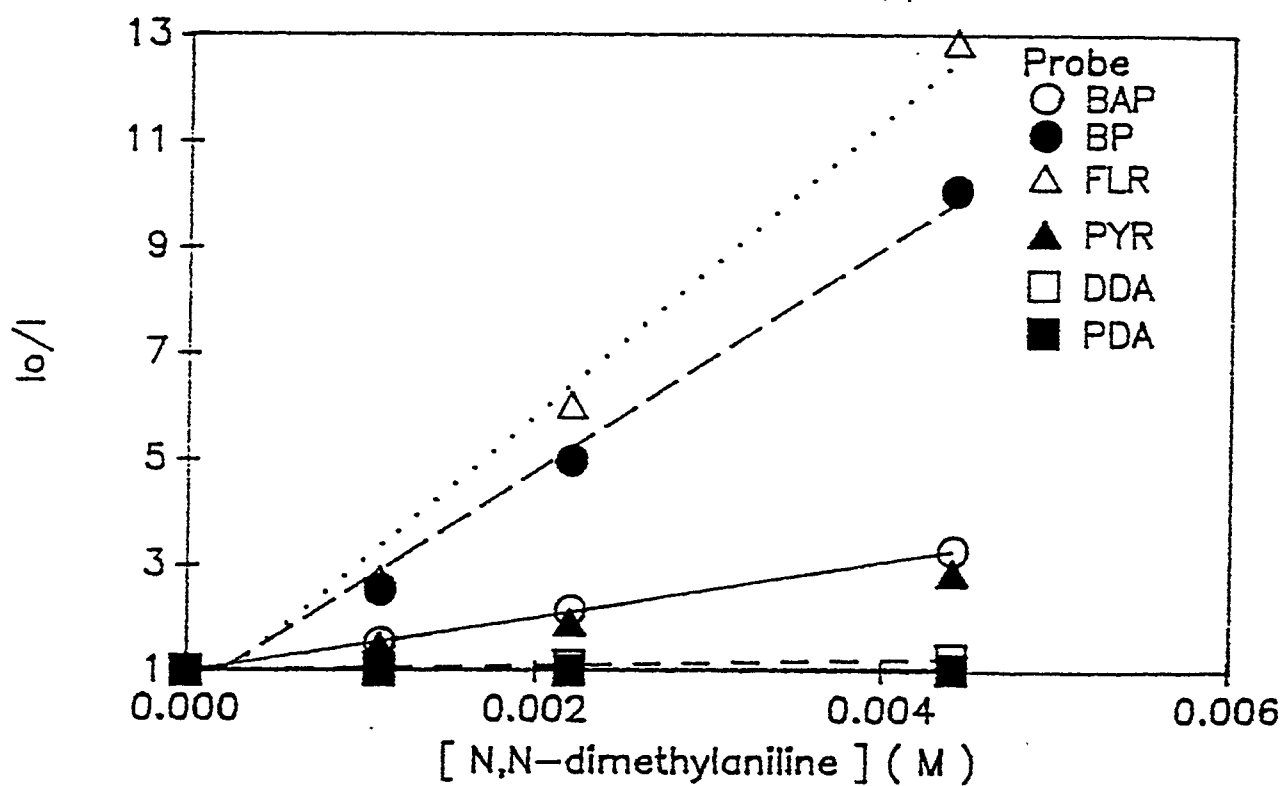


Figure S1. Stern-Volmer plots for the quenching of fluorescent probes on Shandon ODS Hypersil by N,N-Dimethylaniline. Straight lines through data points are least squares fits.

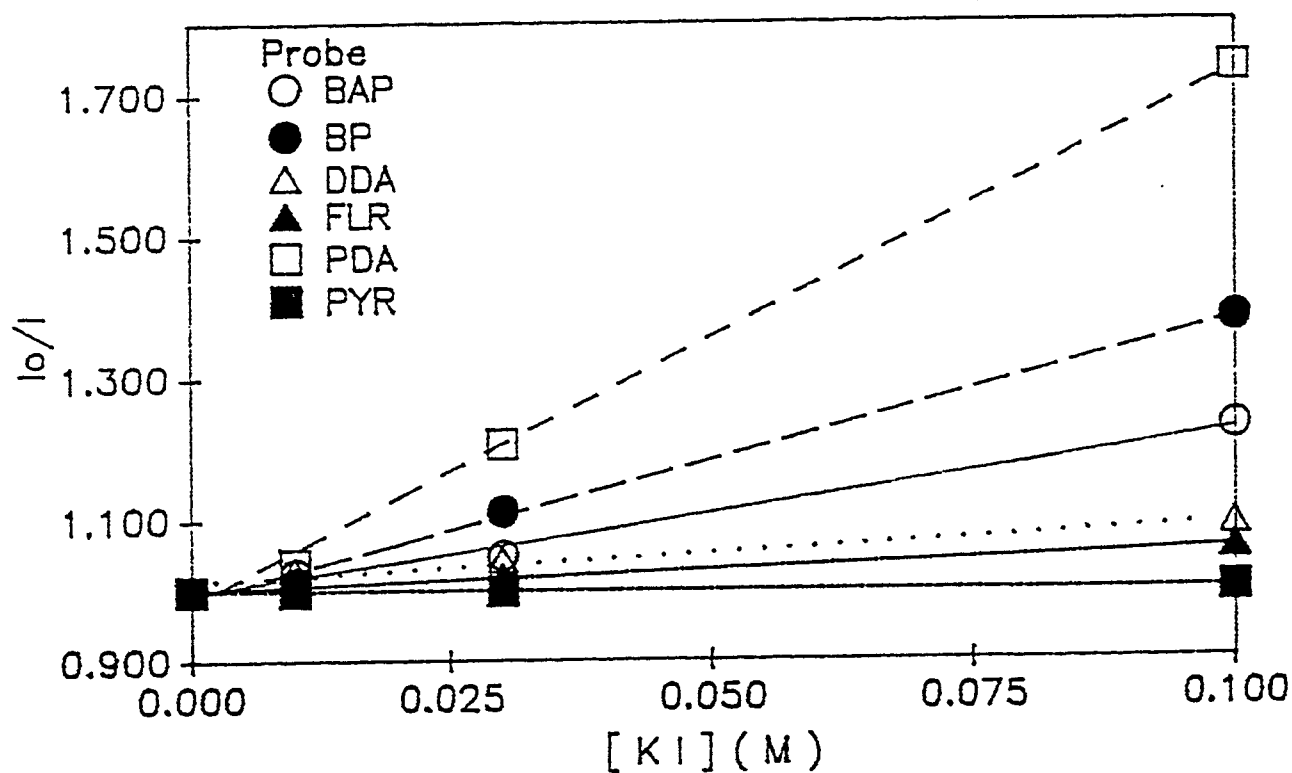


Figure S2. Stern-Volmer plots for the quenching of fluorescent probes on Shandon ODS Hypersil by Potassium Iodide. Straight lines through data points are least squares fits.

Table S1. Vibronic Band Ratios as a Function of Solvent Composition Under Packed Bed (PB) and Free Solution (FS) Conditions for Benzo(a)pyrene (BAP) and Pyrene (PYR)

% MeOH	BAP	PYR
100% PB	2.22 ($\pm$ 0.07)	1.329 ($\pm$ 0.006)
60% PB	1.66 ($\pm$ 0.01)	1.546 ($\pm$ 0.002)
100% FS	1.71 ($\pm$ 0.02)	0.876 ($\pm$ 0.002)
60% FS	1.66 ($\pm$ 0.02)	0.788 ($\pm$ 0.004)

Table S2. Vibronic Band Ratios as a Function of Solvent Composition Under Packed Bed (PB) and Free Solution (FS) Conditions for Fluorene (FLR) and Biphenyl (BP)

%MeOH	FLR	BP
100% PB	0.84 ($\pm$ 0.04)	0.87 ($\pm$ 0.08)
85% PB	-----	0.48 ($\pm$ 0.06)
60% PB	0.95 ($\pm$ 0.03)	1.00 ($\pm$ 0.02)
100% FS	0.646 ($\pm$ 0.003)	-----
85% FS	-----	0.773 ($\pm$ 0.003)
60% FS	0.660 ($\pm$ 0.004)	0.72 ($\pm$ 0.04)

Table S3. Vibronic Band Ratios as a Function of Solvent Composition Under Packed Bed (PB) and Free Solution (FS) Conditions for Propyldansylamide (PDA), and Decyldansylamide (DDA)

% MeOH	PDA	DDA
100% PB	0.963 ($\pm$ 0.002)	0.923 ($\pm$ 0.002)
85% PB	1.353 ($\pm$ 0.002)	1.108 ($\pm$ 0.002)
70% PB	1.060 ($\pm$ 0.001)	1.150 ($\pm$ 0.002)
60% PB	1.180 ($\pm$ 0.008)	1.12 ($\pm$ 0.02)
100% FS	1.033 ($\pm$ 0.003)	1.011 ($\pm$ 0.004)
60% FS	1.622 ($\pm$ 0.024)	1.532 ($\pm$ 0.003)

Table S4. Vibronic Band Ratios as a Function of Quencher Concentration Using 60% MeOH Packed Bed Conditions for the Unquenched and Quenched Probe Populations of Benzo(a)pyrene (BAP), Pyrene (PYR), and Biphenyl (BP)

Probe Population	Quencher and Concentration	BAP	PYR	BP
Unquenched	KI 0.01 M	1.689	1.786	1.026
	0.03 M	1.676	1.812	1.022
	0.10 M	1.656	1.879	1.003
Quenched	KI 0.01 M	0.799	1.414	2.306
	0.03 M	2.253	1.414	1.187
	0.10 M	1.191	1.414	1.114
Unquenched	DMA 0.0011 M	1.644	1.516	1.127
	0.0022 M	1.639	1.476	1.259
	0.0044 M	1.674	1.329	1.483
	0.0110 M	-----	0.964	-----
	0.0220 M	-----	0.763	-----
Quenched	DMA 0.0011 M	1.749	1.943	0.973
	0.0022 M	1.714	1.860	0.980
	0.0044 M	1.682	1.914	0.985
	0.0110 M	-----	1.979	-----
	0.0220 M	-----	2.372	-----

Table S5. Vibronic Band Ratios as a Function of Quencher Concentration Using 60% MeOH Packed Bed Conditions for the Unquenched and Quenched Probe Populations of Fluorene (FLR), Propyldansylamide (PDA), and Decyldansylamide (DDA)

Probe Population	Quencher and Concentration	FLR	PDA	DDA
Unquenched	KI 0.01M	0.962	1.126	1.109
	0.03M	0.962	1.122	1.116
	0.10M	0.948	1.180	1.124
Quenched	KI 0.01M	0.004	0.799	1.130
	0.03M	0.000	0.794	1.105
	0.10M	0.024	0.915	1.085
Unquenched	DMA 0.0011M	1.009	-----	-----
	0.0022M	1.103	-----	-----
	0.0044M	1.235	-----	-----
	0.0055M	-----	0.862	0.993
	0.0110M	-----	0.732	0.991
	0.0220M	-----	0.692	0.987
Quenched	DMA 0.0011M	0.932	-----	-----
	0.0022M	0.926	-----	-----
	0.0044M	0.914	-----	-----
	0.0055M	-----	-----	1.031
	0.0110M	-----	-----	1.012
	0.0220M	-----	-----	1.007