Supporting Information

1, 2, 3-selenadiazoles driven single family MSNCs of CdSe

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Figure SI 1: FTIR spectrum of 5-ethyl-4-propyl-1,2,3-selenadiazole (3)

Figure SI 2: FTIR spectrum of 4-heptyl-1,2,3-selenadiazole (4)
Figure SI 3: FTIR spectrum of 4-(4-nitro phenyl)-1,2,3-selenadiazole (6)

Figure SI 4: FTIR spectrum of 5-ethyl-4-phenyl-1,2,3-selenadiazole (8)

Figure SI 5: $^1$H NMR of 5-ethyl-4-propyl-1,2,3-selenadiazole (3)
Figure SI 6: $^{13}$C NMR of 5-ethyl-4-propyl-1,2,3-selenadiazole (3)

Figure SI 7: $^1$H NMR of 4-heptyl-1,2,3-selenadiazole (4)

Figure SI 8: $^{13}$C NMR of 4-heptyl-1,2,3-selenadiazole (4)
**Figure SI 9:** $^1$H NMR of 4-(4-nitro phenyl)-1,2,3-selenadiazole (6)

**Figure SI 10:** $^{13}$C NMR of 4-(4-nitro phenyl)-1,2,3-selenadiazole (6)

**Figure SI 11:** $^1$H NMR of 5-ethyl-4-phenyl-1, 2, 3-selenadiazole (8)
Figure SI 12: $^{13}$C NMR spectrum of 5-ethyl-4-phenyl-1, 2, 3-selenadiazole (8)

Figure SI 13: Mass spectrum of 5-ethyl-4-propyl-1,2,3-selenadiazole (3)

Figure SI 14: Mass spectrum of 4-heptyl-1,2,3-selenadiazole (4)
Figure SI 15: Mass spectrum of 4-(4-nitro phenyl)-1,2,3-selenadiazole (6)

Figure SI 16: Mass spectrum of 5-ethyl-4-phenyl-1,2,3-selenadiazole (8)

Figure SI 17: TGA of 1,2,3-selenadiazoles (3, 4, 6, 8)
Figure SI 18: Particle size distribution profiles of CdSe MSNCs prepared from different derivatives of 1,2,3-selenadiazoles (A-I)