Electronic Supporting Information:

Conformational transitions and helical structures of a semiexible dipolar chain in external electric fields.

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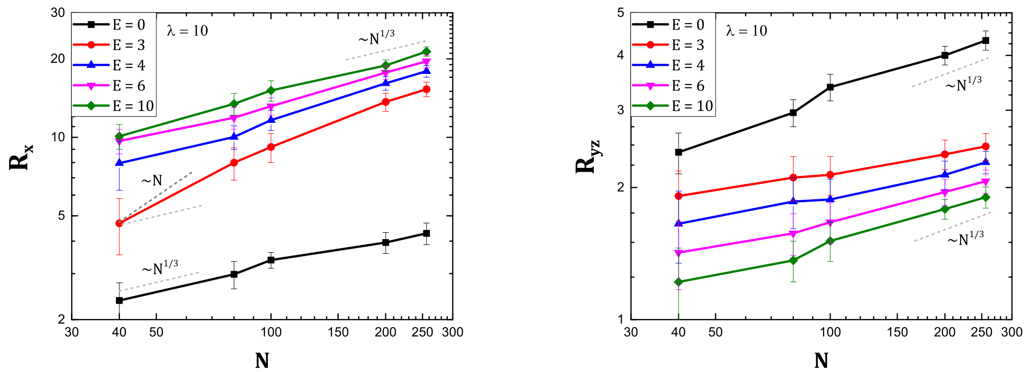

Figure S1. Dependences of R_x (left) and R_{yz} (right) on the chain length N for different E at $\lambda = 10$.

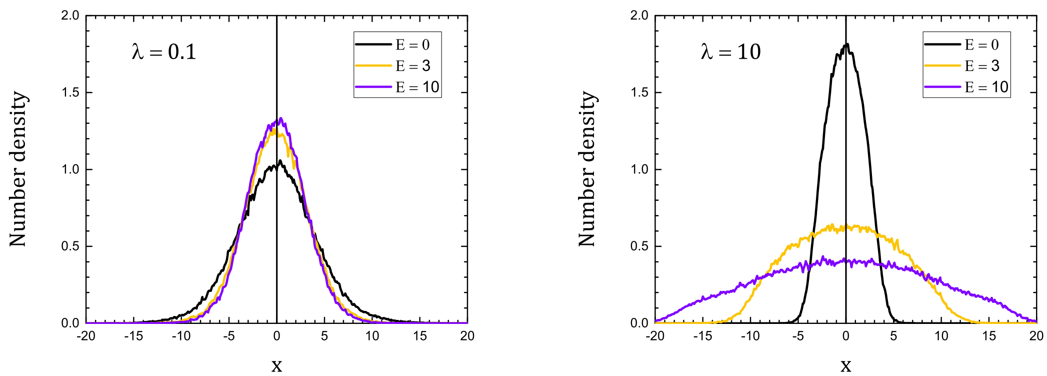

Figure S2. The number density of backbone beads of the dipolar chain along the X-axis under weak and strong electrostatic interactions, $\lambda = 0.1$ and 10, respectively. The coordinate $x = 0$ is the center mass of the chain.

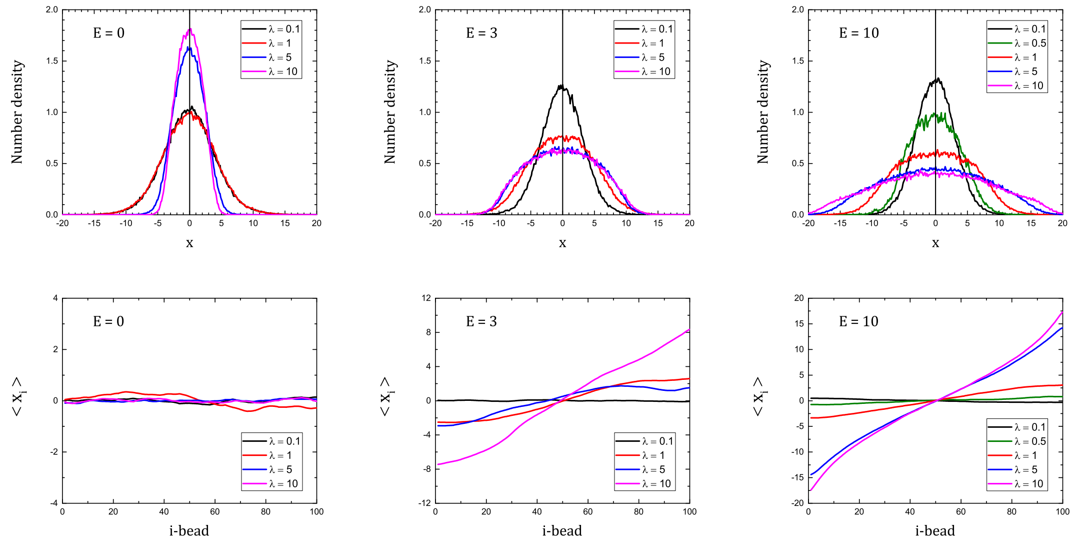

Figure S3. The number density of backbone beads of the dipolar chain along the X-axis (top) and the mean value of the x-coordinate of i-bead relative to the center of mass of the chain (bottom) for various λ at $E = 0, 3$ and 10.

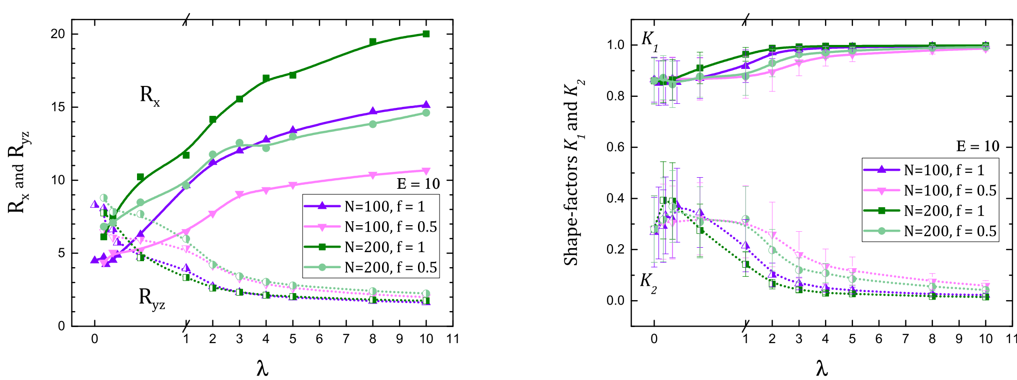

Figure S4. Dependences of R_x and R_{yz} (left) and shape-factors K_1 and K_2 (right) on λ for chain of different length ($N = 100, 200$) and fraction of polar groups ($f = 0.5, 1$) at $E = 10$.

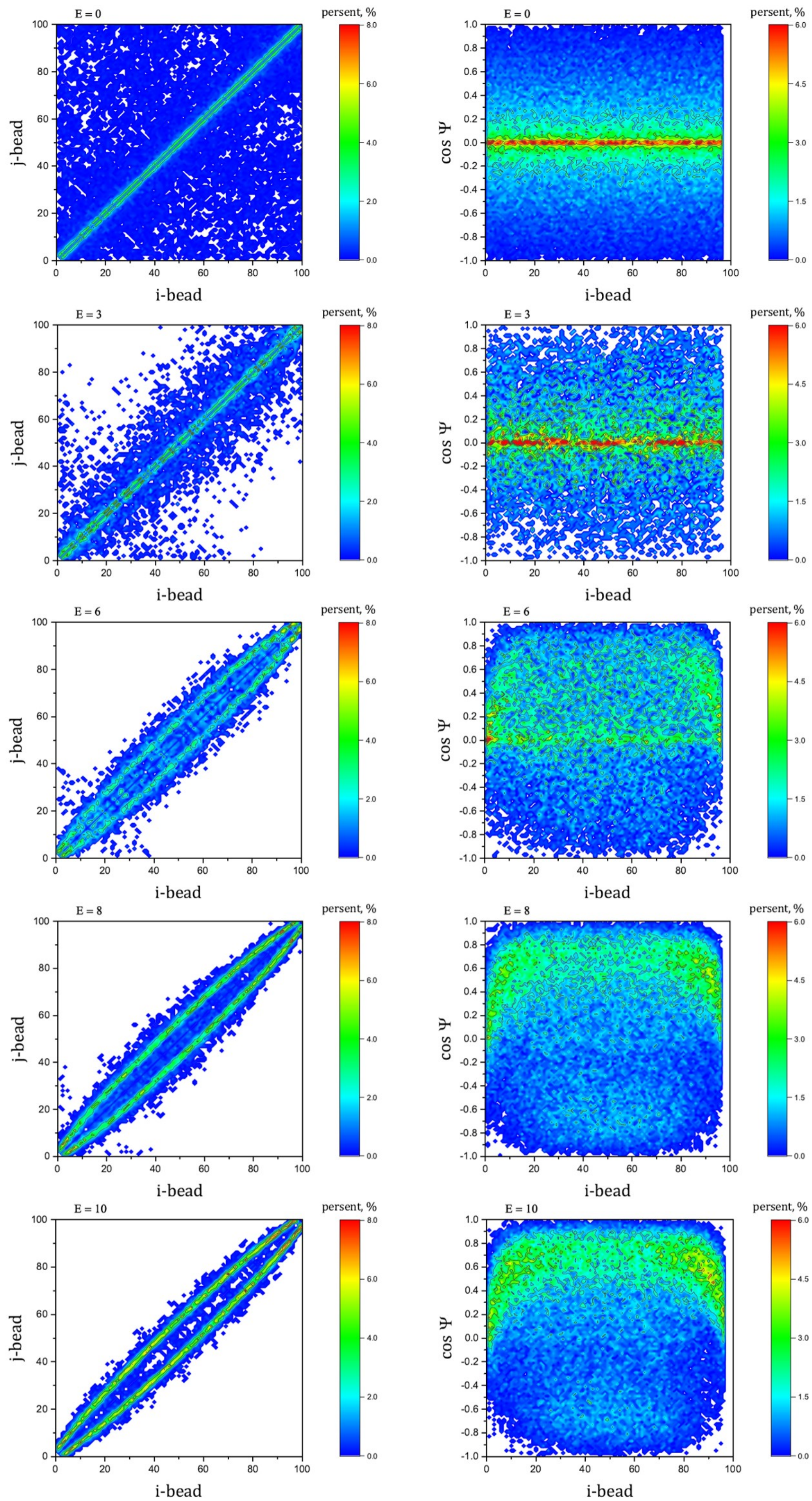

Figure S5. Contact maps and distributions of dihedral angles along the dipolar chain at $\lambda = 10$ for various $E = 0, 3, 6, 8$ and 10.

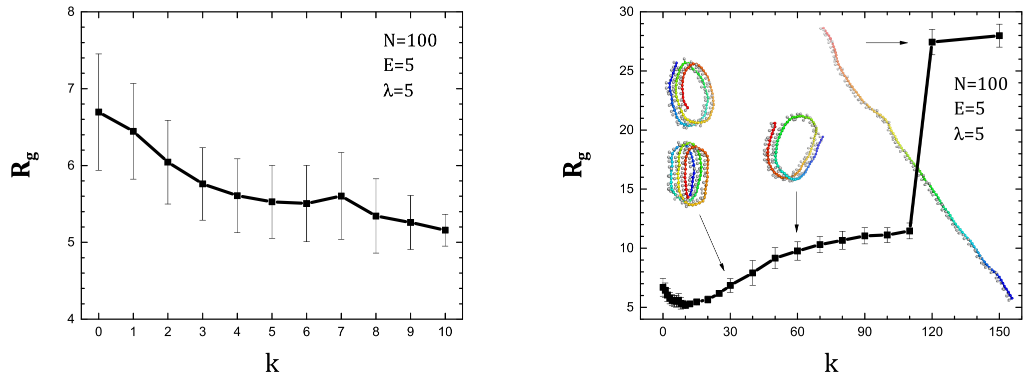

Figure S6. Dependences of R_g on the chain rigidity k at $E = 5$ and $\lambda = 5$.

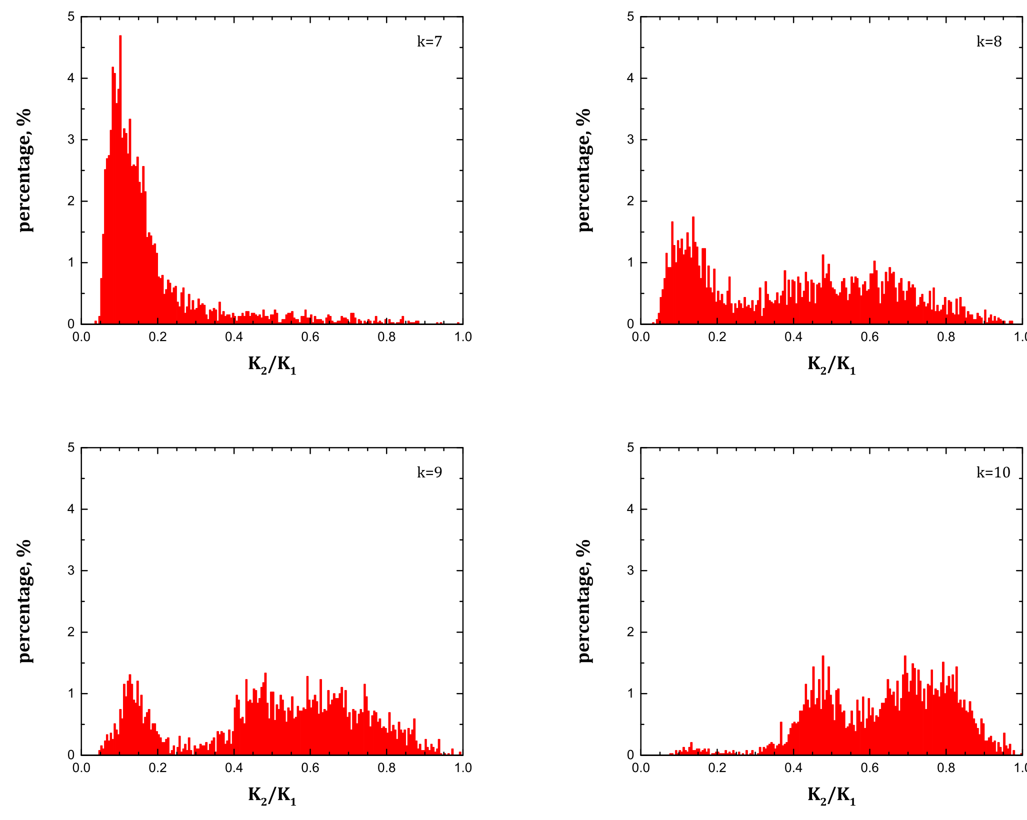

Figure S7. K_2/K_1 distibution histogram for the dipolar chains of different rigidity $k = 7 - 10$ at $E = 5$ and $\lambda = 5$