

Supporting Information

Oscillatory Tunnel Magnetoresistance in a Carbon Nanotube Based Three-Terminal Magnetic Tunnel Junction

Meghnath Jaishi and Ranjit Pati*

*Department of Physics and Henes Center for Quantum Phenomena, Michigan Technological
University, Houghton, MI 49931*

*E-mail: patir@mtu.edu

Table S1. The optimized atomic coordinates of the (8, 0) CNT channel (length of 15.66 Å).

Unit Cell (32 atoms) Lattice Parameter = 4.27 Å; Energy band gap= 0.58 eV				
Serial Number	Atom	X(Å)	Y(Å)	Z(Å)
1	C	8.12194	5.62116	4.00512
2	C	8.12194	5.62116	1.15288
3	C	7.64794	6.76917	1.87018
4	C	7.64794	6.76917	3.28782
5	C	6.76917	7.64794	4.00518
6	C	6.76917	7.64794	1.15282
7	C	5.62116	8.12193	1.87011
8	C	5.62116	8.12193	3.28789
9	C	4.37884	8.12194	4.00512
10	C	4.37884	8.12194	1.15288
11	C	3.23083	7.64794	1.87018
12	C	3.23083	7.64794	3.28782
13	C	2.35206	6.76917	4.00518
14	C	2.35206	6.76917	1.15282
15	C	1.87807	5.62116	1.87011
16	C	1.87807	5.62116	3.28789
17	C	1.87806	4.37884	4.00512
18	C	1.87806	4.37884	1.15288
19	C	2.35206	3.23083	1.87018
20	C	2.35206	3.23083	3.28782
21	C	3.23083	2.35206	4.00518
22	C	3.23083	2.35206	1.15282
23	C	4.37884	1.87807	1.87011
24	C	4.37884	1.87807	3.28789
25	C	5.62116	1.87806	4.00512
26	C	5.62116	1.87806	1.15288
27	C	6.76917	2.35206	1.87018
28	C	6.76917	2.35206	3.28782
29	C	7.64794	3.23083	4.00518
30	C	7.64794	3.23083	1.15282
31	C	8.12193	4.37884	1.87011
32	C	8.12193	4.37884	3.28789
33	C	8.1219	5.6212	8.2751
34	C	8.1219	5.6212	5.4229
35	C	7.6479	6.7692	6.1402
36	C	7.6479	6.7692	7.5578
37	C	6.7692	7.6479	8.2752

38	C	6.7692	7.6479	5.4228
39	C	5.6212	8.1219	6.1401
40	C	5.6212	8.1219	7.5579
41	C	4.3788	8.1219	8.2751
42	C	4.3788	8.1219	5.4229
43	C	3.2308	7.6479	6.1402
44	C	3.2308	7.6479	7.5578
45	C	2.3521	6.7692	8.2752
46	C	2.3521	6.7692	5.4228
47	C	1.8781	5.6212	6.1401
48	C	1.8781	5.6212	7.5579
49	C	1.8781	4.3788	8.2751
50	C	1.8781	4.3788	5.4229
51	C	2.3521	3.2308	6.1402
52	C	2.3521	3.2308	7.5578
53	C	3.2308	2.3521	8.2752
54	C	3.2308	2.3521	5.4228
55	C	4.3788	1.8781	6.1401
56	C	4.3788	1.8781	7.5579
57	C	5.6212	1.8781	8.2751
58	C	5.6212	1.8781	5.4229
59	C	6.7692	2.3521	6.1402
60	C	6.7692	2.3521	7.5578
61	C	7.6479	3.2308	8.2752
62	C	7.6479	3.2308	5.4228
63	C	8.1219	4.3788	6.1401
64	C	8.1219	4.3788	7.5579
65	C	8.1219	5.6212	12.5451
66	C	8.1219	5.6212	9.6929
67	C	7.6479	6.7692	10.4102
68	C	7.6479	6.7692	11.8278
69	C	6.7692	7.6479	12.5452
70	C	6.7692	7.6479	9.6928
71	C	5.6212	8.1219	10.4101
72	C	5.6212	8.1219	11.8279
73	C	4.3788	8.1219	12.5451
74	C	4.3788	8.1219	9.6929
75	C	3.2308	7.6479	10.4102
76	C	3.2308	7.6479	11.8278
77	C	2.3521	6.7692	12.5452
78	C	2.3521	6.7692	9.6928

79	C	1.8781	5.6212	10.4101
80	C	1.8781	5.6212	11.8279
81	C	1.8781	4.3788	12.5451
82	C	1.8781	4.3788	9.6929
83	C	2.3521	3.2308	10.4102
84	C	2.3521	3.2308	11.8278
85	C	3.2308	2.3521	12.5452
86	C	3.2308	2.3521	9.6928
87	C	4.3788	1.8781	10.4101
88	C	4.3788	1.8781	11.8279
89	C	5.6212	1.8781	12.5451
90	C	5.6212	1.8781	9.6929
91	C	6.7692	2.3521	10.4102
92	C	6.7692	2.3521	11.8278
93	C	7.6479	3.2308	12.5452
94	C	7.6479	3.2308	9.6928
95	C	8.1219	4.3788	10.4101
96	C	8.1219	4.3788	11.8279
97	C	8.1219	5.6212	16.8151
98	C	8.1219	5.6212	13.9629
99	C	7.6479	6.7692	14.6802
100	C	7.6479	6.7692	16.0978
101	C	6.7692	7.6479	16.8152
102	C	6.7692	7.6479	13.9628
103	C	5.6212	8.1219	14.6801
104	C	5.6212	8.1219	16.0979
105	C	4.3788	8.1219	16.8151
106	C	4.3788	8.1219	13.9629
107	C	3.2308	7.6479	14.6802
108	C	3.2308	7.6479	16.0978
109	C	2.3521	6.7692	16.8152
110	C	2.3521	6.7692	13.9628
111	C	1.8781	5.6212	14.6801
112	C	1.8781	5.6212	16.0979
113	C	1.8781	4.3788	16.8151
114	C	1.8781	4.3788	13.9629
115	C	2.3521	3.2308	14.6802
116	C	2.3521	3.2308	16.0978
117	C	3.2308	2.3521	16.8152
118	C	3.2308	2.3521	13.9628
119	C	4.3788	1.8781	14.6801

120	C	4.3788	1.8781	16.0979
121	C	5.6212	1.8781	16.8151
122	C	5.6212	1.8781	13.9629
123	C	6.7692	2.3521	14.6802
124	C	6.7692	2.3521	16.0978
125	C	7.6479	3.2308	16.8152
126	C	7.6479	3.2308	13.9628
127	C	8.1219	4.3788	14.6801
128	C	8.1219	4.3788	16.0979