MSN-501 Tight Binding Project

Generate the band structure of carbon monoatomic chain (which can be modeled as a 1D crystal) by using tight binding method. You can use any software (Fortran, matlab, …) you prefer

1- Consider only first nearest interactions

2- Check the tight-binding calculation in “"Atomic strings of group IV, III–V, and II–VI elements" S. Tongay, E. Durgun, S. Ciraci Appl. Phys. Lett. 85, 6179 (2004)”

3- Cite the literature where you have obtained the tight-binding parameters

4- Attach the code together with your results

5- Briefly explain your methodology and interpret your results

6- Email your project to durgun@unam.bilkent.edu.tr as **a single pdf document**