

????????, ???? , ?????, ????????????? ??????? (????, 7. IX 1953). ?? ??????? ????????? ?  
???????? ????????? 1975. ? ????????? 1982. ?? ????? ????????? ????? ?? ??? 1977, ? ?? 1994. ??  
???????? ?????????. ?? ????????? ? ????????? ????????? ??????? ??????? ????????? ? ?????????  
??????, ? ?? 2003. ?? ????????????? ????????????? ? ?????, ?? ????????????????? ?????????, ??? ?  
?????????????????. ?? ????????? ????? ????? ??????? ?? 2006, ? ?? ????????? 2012. ??? ?? ?????????  
???????? ? ????????? ????????? ? ??????? ?? (??????, „Full Symmetry, Optical Activity and Potentials of  
Single- and Multi-wall Nanotubes", *Phys. Rev. B*, 1999, 60; ?????, „Symmetry Based Fundamentals on  
Carbon Nanotubes", 2, ? S. V. Rotkin, S. Subramoney (??), *Applied Physics of Nanotubes, Fundamentals of  
Theory, Optics and Transport Devices*, Berlin 2005). ????? ?? ??? ????????????????? ????????? ?? ???  
????????, ??? ? ?????????a „? ????????? ? ????????? ?????a???????????? ??????" (?????? ?????????  
?????, 1995, 1) ? *Line groups in Physics* (? I. Miloševi?, Berlin 2010). ? ??????? ????????????? ???????  
???????????? ?? 2014. ??????? ?? ????? ??? ??????, ??? ?? ????????? ????? ??????? ????. ?????????  
?? ??? ??????? ? ????????????? ????????????????????? ????????? ?? ?????, ? ????? ????????????? ??  
?????????? ??????? ?? ????????????? ??????? ?? ?????, ???????, ???????, ???????, ????? ?  
?????????. ????? ?? ?? ????????? ? ????????????? ??????? ??????? ????????????? „Nanotexnology"  
? ??????. ????? 2000. ??????? ?? ????????????? ?? ??????????????? ?? ????????? ??????????. ? ?????????  
???????????????? ??????? ? ? ?????? ????????? ??????????? (? M. Vuji?i?, „Magnetic line groups", *Phys. Rev. B*,  
1982, 25, 11; ? B. Nikoli?, I. Miloševi?, „Symmetry of nanotubes rolled up from arbitrary two-dimensional lattices  
along an arbitrary chiral vector", *Phys. Rev. B*, 2007, 75; ? N. Lazi?, M. Milivojevi?, „Spin line groups", *Acta Cryst.*  
A, 2013, 69, 611). ????????? ?? ??????? „?????. ?? ????? ??????" (2006).

????: ? I. Miloševi?, „Normal vibrations and Jahn-Teller effect for polymers and quasi-one-dimensional systems",  
*Phys. Rev. B*, 1993, 47, 13; ??????????? ????????? ? ?????, ?? 2000; ? T. Vukovi?, I. Miloševi?, „Modified group  
projectors: tight-binding method", *J. Phys. A*, 2000, 33; ? Z. P. Popovi?, I. Miloševi?, „Phonon transport in  
helically coiled carbon nanotubes", *Carbon*, 2014, 77.

????? ???-??????

\*????? ?? ????????? ? 1. ????? III ???? ?????? ????????????????? (2018)