

Emergent quasiparticles in Euclidean tiling

F. Crasto de Lima^{1,*} and A. Fazzio^{1,†}

¹*Brazilian Nanotechnology National Laboratory CNPEM,
C.P. 6192, 13083-970, Campinas, SP, Brazil*

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Abstract

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$k = 1$ LATTICES

t1001

Tiling reference number t1001 with space-group ' $P6/mmm$ ' (191) and 2 sites in the unit cell, with vertex type indicated in Tab. S1. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S1.

TABLE S1. Tiling t1001 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	2	0	0	0	0	0	0	0	0	0	0	0	0

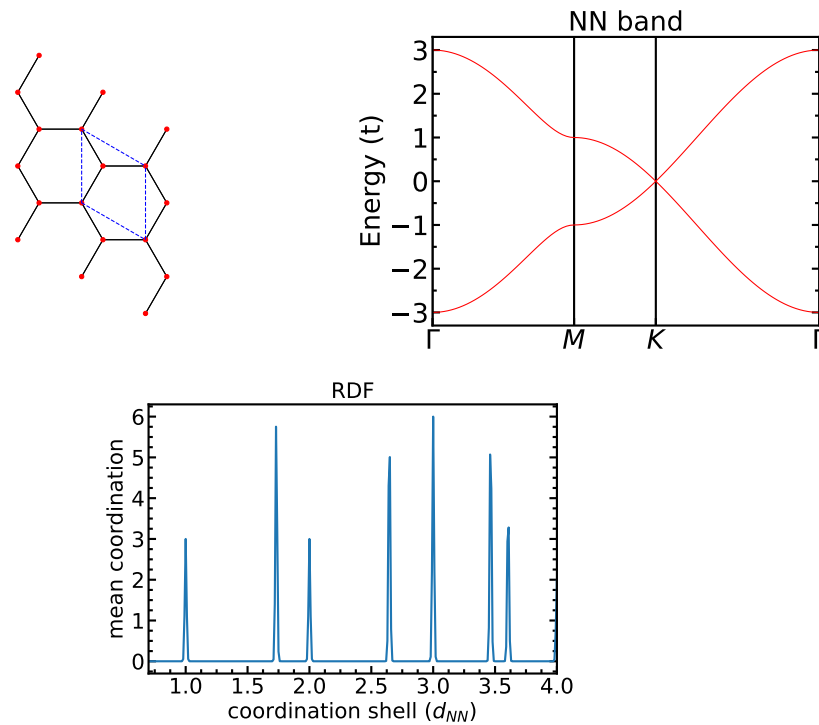


FIG. S1. t1001 lattice framework, nearest neighbors band structure and radial distribution function.

t1002

Tiling reference number t1002 with space-group ' $P4/mmm'$ ' (123) and 4 sites in the unit cell, with vertex type indicated in Tab. S2. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S2.

TABLE S2. Tiling t1002 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	4	0	0	0	0	0	0	0	0	0

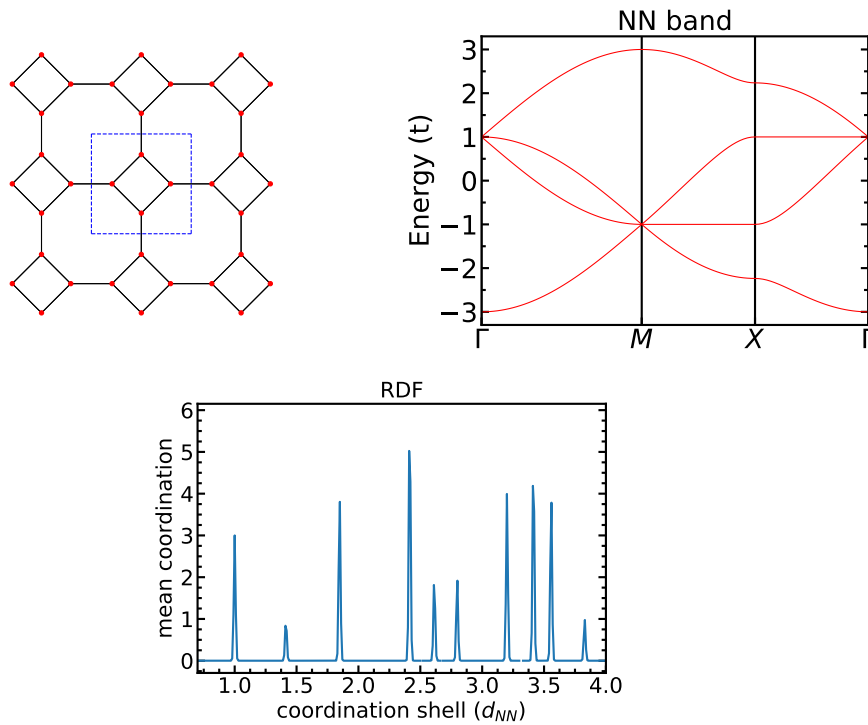


FIG. S2. t1002 lattice framework, nearest neighbors band structure and radial distribution function.

t1003

Tiling reference number t1003 with space-group ' $Amm2'$ ' (38) and 12 sites in the unit cell, with vertex type indicated in Tab. S3. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S3.

TABLE S3. Tiling t1003 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	12	0	0	0	0	0	0	0	0	0	0

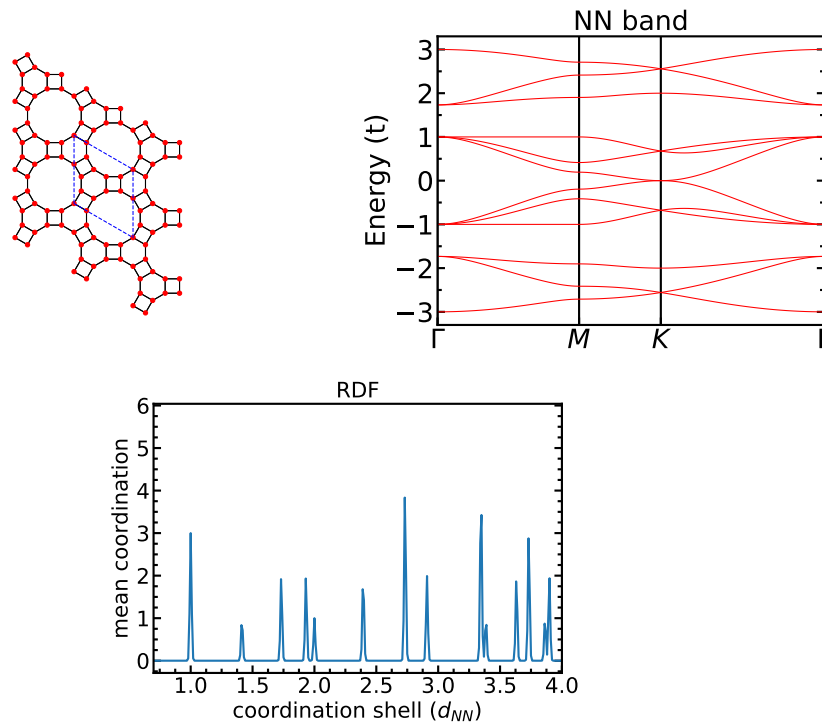


FIG. S3. t1003 lattice framework, nearest neighbors band structure and radial distribution function.

t1004

Tiling reference number t1004 with space-group ' Pm' ' (6) and 6 sites in the unit cell, with vertex type indicated in Tab. S4. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S4.

TABLE S4. Tiling t1004 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	6	0	0	0	0	0	0	0	0	0	0	0

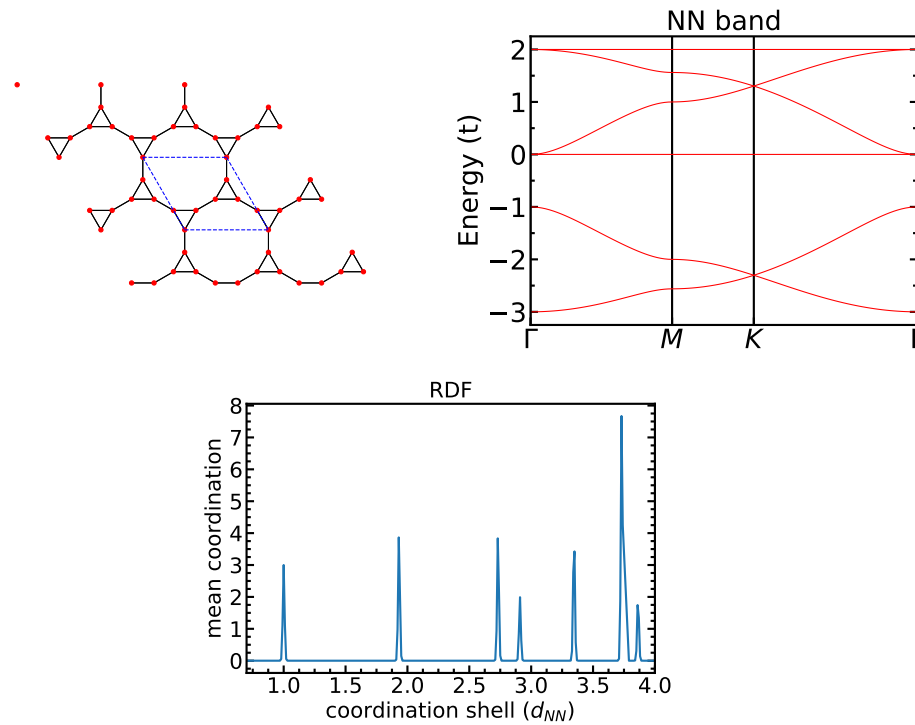


FIG. S4. t1004 lattice framework, nearest neighbors band structure and radial distribution function.

t1005

Tiling reference number t1005 with space-group ' $P4/mmm'$ ' (123) and 1 sites in the unit cell, with vertex type indicated in Tab. S5. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S5.

TABLE S5. Tiling t1005 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

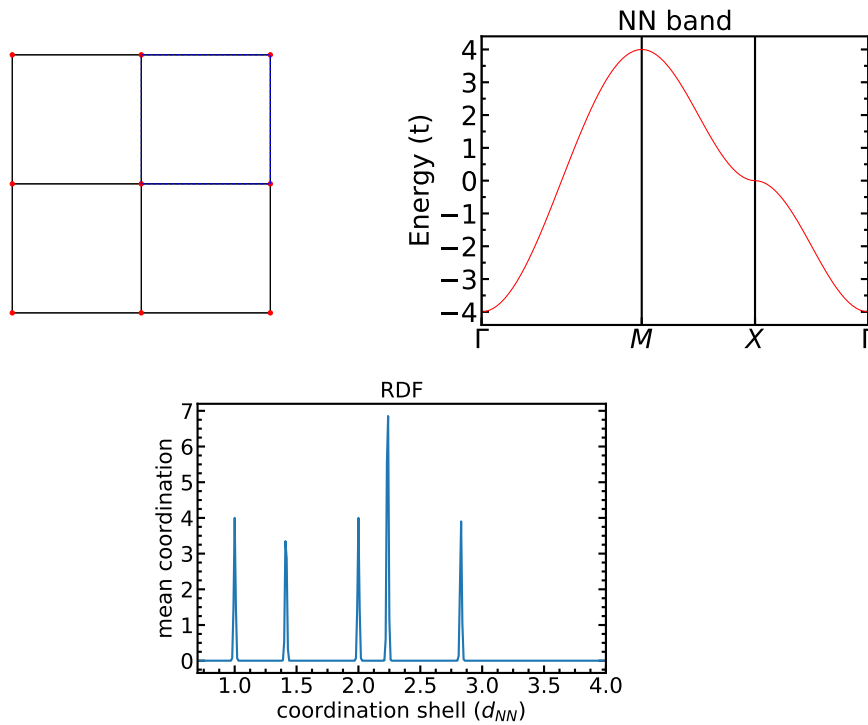


FIG. S5. t1005 lattice framework, nearest neighbors band structure and radial distribution function.

t1006

Tiling reference number t1006 with space-group ' Pm' ' (6) and 6 sites in the unit cell, with vertex type indicated in Tab. S6. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S6.

TABLE S6. Tiling t1006 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	6	0	0	0	0	0	0	0	0

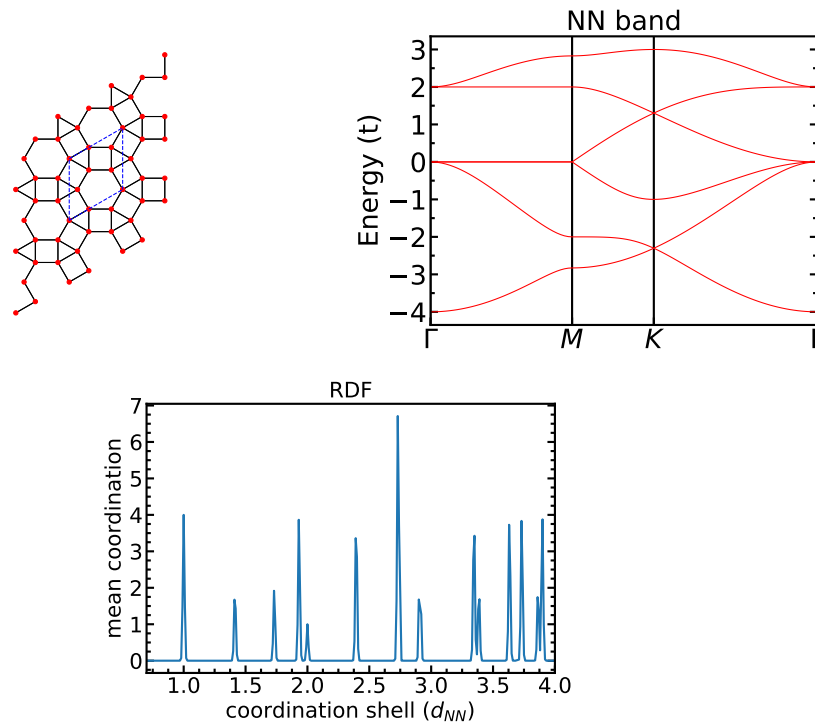


FIG. S6. t1006 lattice framework, nearest neighbors band structure and radial distribution function.

t1007

Tiling reference number t1007 with space-group ' $P6/mmm'$ ' (191) and 3 sites in the unit cell, with vertex type indicated in Tab. S7. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S7.

TABLE S7. Tiling t1007 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	0	3	0	0	0	0	0	0	0

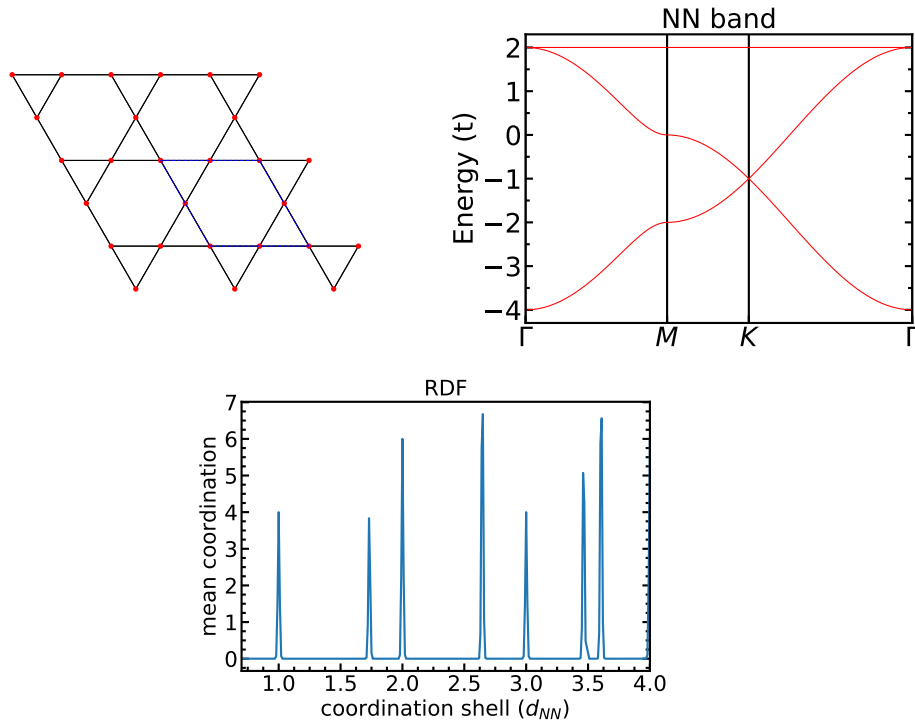


FIG. S7. t1007 lattice framework, nearest neighbors band structure and radial distribution function.

t1008

Tiling reference number t1008 with space-group ' $Cmmm'$ ' (65) and 2 sites in the unit cell, with vertex type indicated in Tab. S8. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S8.

TABLE S8. Tiling t1008 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0

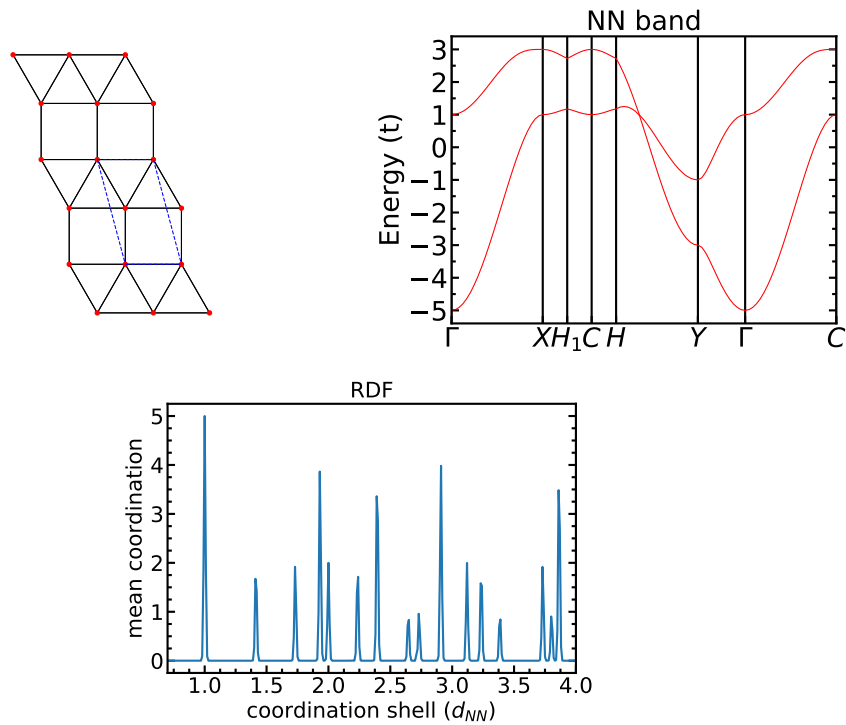


FIG. S8. t1008 lattice framework, nearest neighbors band structure and radial distribution function.

t1009

Tiling reference number t1009 with space-group ' $P4/mbm'$ ' (127) and 4 sites in the unit cell, with vertex type indicated in Tab. S9. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S9.

TABLE S9. Tiling t1009 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	0	0	0	4	0	0	0	0	0

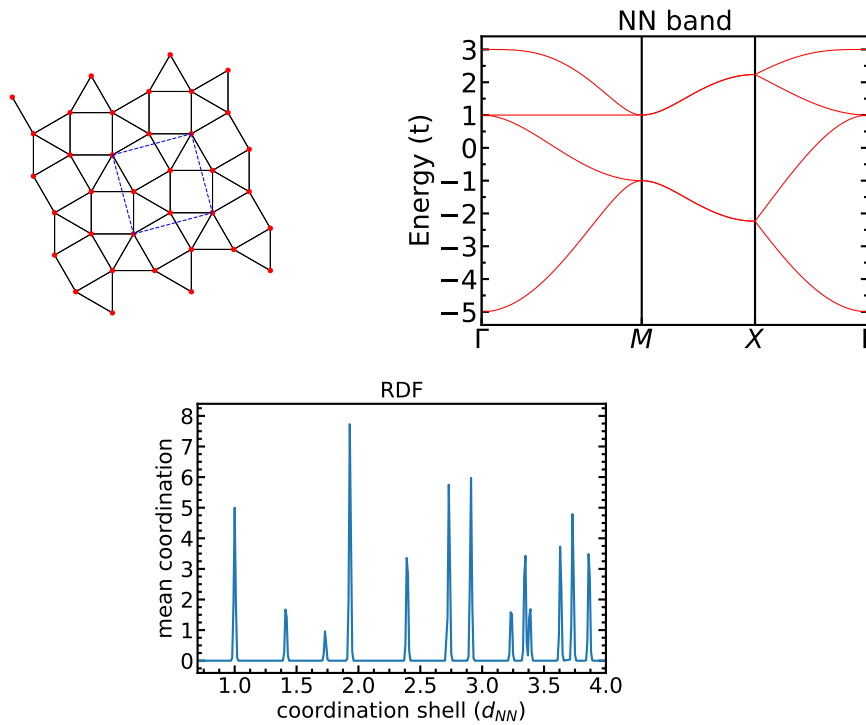


FIG. S9. t1009 lattice framework, nearest neighbors band structure and radial distribution function.

t1010

Tiling reference number t1010 with space-group ' $P6/m'$ ' (175) and 6 sites in the unit cell, with vertex type indicated in Tab. S10. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S10.

TABLE S10. Tiling t1010 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	0	0	6	0	0	0	0	0	0

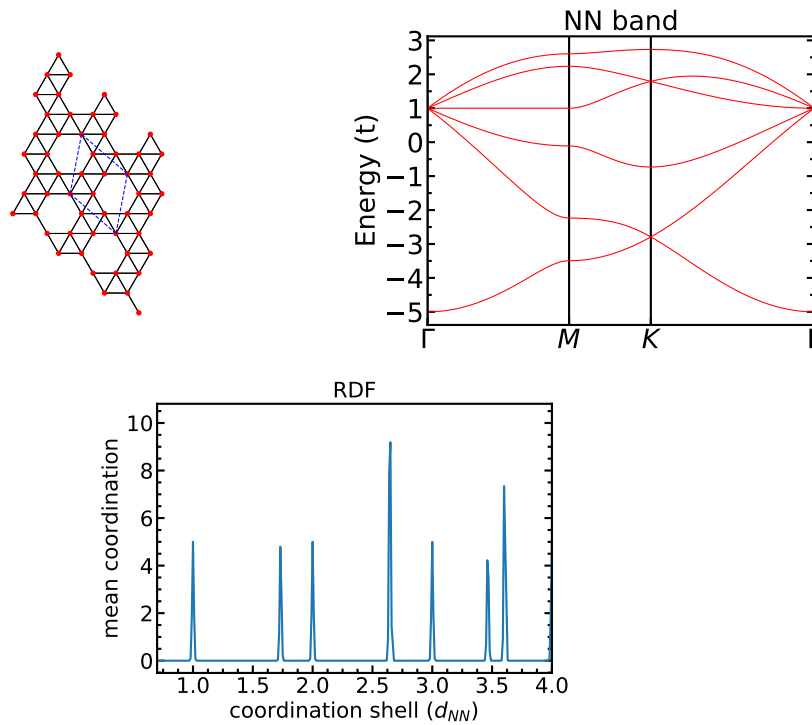


FIG. S10. t1010 lattice framework, nearest neighbors band structure and radial distribution function.

t1011

Tiling reference number t1011 with space-group ' $P6/mmm'$ ' (191) and 1 sites in the unit cell, with vertex type indicated in Tab. S11. The respective lattice structure, nearest neighbors band structure, and radial distribution function is shown in Fig S11.

TABLE S11. Tiling t1011 vertex types

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

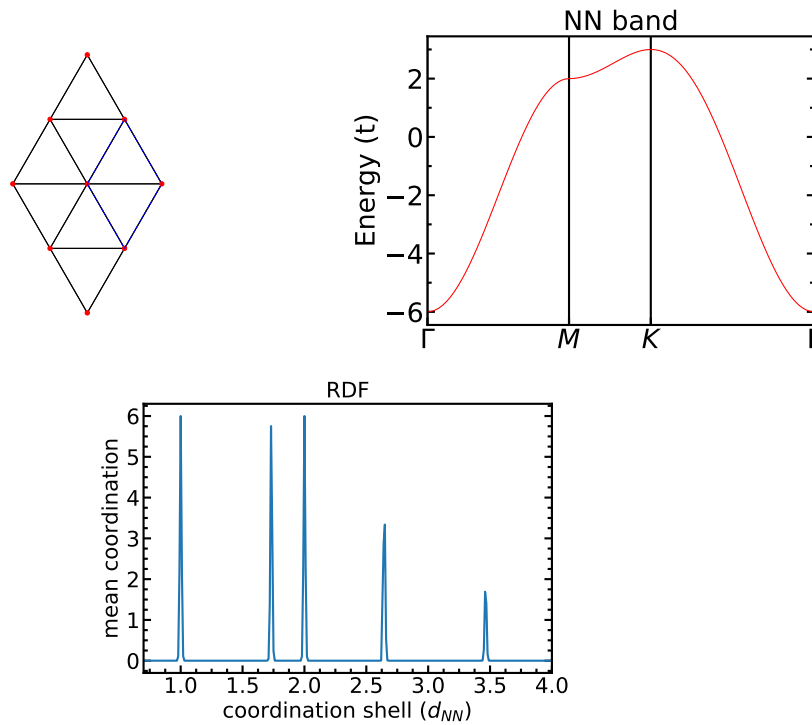


FIG. S11. t1011 lattice framework, nearest neighbors band structure and radial distribution function.

* felipe.lima@lnnano.cnpem.br

† adalberto.fazzio@lnnano.cnpem.br