

Molecular Knitting

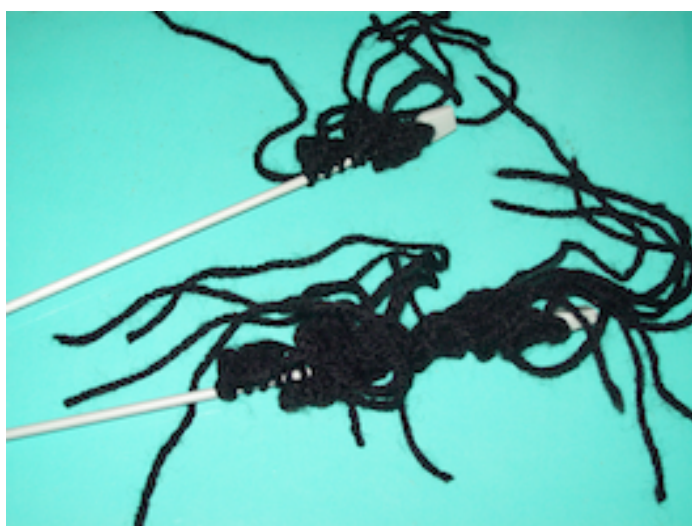
Molecules and atoms are the chemical components that make up the universe and as such make for fun and diverse knitting subject. There are many molecular and science knits available through out the internet. This booklet contains the instructions on how to knit a Bucky Ball or the third polymorph of the element carbon. It also gives instructions on how to knit two other atoms oxygen and hydrogen in the hope that you may wish to explore the world of molecules yourself and create your own.

This pattern is not yet available on the net but will soon be along with other molecular knits by Sarah Snell-Pym.

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Carbon

Black wool DK



Cast on 4
Increase in every stitch (one in the front one in the back) 8 stitches
Knit a row
Purl a row
knit a row
Purl a row
knit 2 together in every stitch (4 stitches)

cast off

Sew up so that the wrong side of the stocking stitch is on the outside and stuff with a little bit of wadding or scrap wool.

(leave long ends for sewing up and attaching to each other to make the larger molecules)



Bucky Ball (Buckminster Fullerene)

Knit 60 carbon atoms



Thread five of the carbons onto one thread so you have a string then thread the end back through the first carbon. Pull the thread tight enough to make a loop of carbons that are all touching each other. They should make a nice five sided shape. Do not pull the threads too tight otherwise you will distort the shape. Tie the ends off and thread them away.

Make five more of these so that you now have 6 little five sided shapes. Arrange them so that you have one in the middle with the remaining five around it (one for each carbon or point in the middle one).

Sew them together making sure that you make six sided shapes between each group of three five sided shapes. The shape is basically that of a football with five and six sided shapes. For strength it is best to thread each of these six sided shapes like you did the five sided shapes even though the carbons are already part of five sided shapes.



This should come out as a bowl shape, sew together the remaining carbons in the same pattern and put the two halves together again sewing the five sided shapes into six sided gaps to make the sphere or ball.



To make the ball sturdier for children to play with make sure you put the thread through each atom at least twice. The atoms can also double as knitted beads. You can make many structures out of these simple little knits. Add in oxygen and hydrogen and you can make a vast array of molecular knits.

Oxygen

Red wool DK

Cast on 5

Increase in every stitch (one in the front one in the back) 10 stitches

Purl a row

Knit a row

Purl a row

Knit a row

Purl a row

Knit two together (5 stitches)

Cast off.

Sew up so that the wrong side of the stocking stitch is on the outside and stuff with a little bit of wadding or scrap wool.

(leave long ends for sewing up and attaching to each other to make the larger molecules)

Hydrogen

White wool DK

Cast on 3

increase in every stitch (one in the back one in the front) 6 stitches

Purl a row

Knit a row

Purl a row

Knit two together

Cast off

Sew up so that the wrong side of the stocking stitch is on the outside and stuff with scrap wool/or end of the sewing up thread.

(leave long ends for sewing up and attaching to each other to make the larger molecules)