The Molecular Orbital Blues

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Hey this ain't Physics, no, this ain't Math.
It's Organic Chemistry and I hope I don't take a Bath!
This M.O. Theory, I just don't get this thing.
And now this guy's tellin' me that it's just like this guitar string.
Oh man I got, the Molecular Orbital Blues!

Just look at ethylene, the bonding is π.
The HOMO's way down here, and the LUMO's way up high.
The HOMO is bonding, it don't have a node,
and the LUMO's repulsive? Can I do this with my course load?!
Oh man I got, the Molecular Orbital Blues!

Two p A.O.s in, two π M.O.s out,
that's what ethylene is all about.
I play this note here, it's just like the HOMO,
I put in a node (*harmonic guitar note*), and I get the LUMO.
Oh man I got, the Molecular Orbital Blues!

Allyl has got, three carbons in line,
2,3, or 4 electrons are fine.
The all bonding ψ1 is filled in the cation,
but the HOMO's nonbonding in allyl anion.
Oh man I got, the Molecular Orbital Blues!

In ψ2 in allyl, the node's on C2,
Ya' know it gets pretty lonely when there's no electron on you.
ψ2 don't change the structure, the bonds don't change size,
It's nonbonding baby, and I can empathise!
Oh man I've got, the Molecular Orbital Blues!

The number of carbons on butadiene is 4,
Two occupied M.O.s and on top of them there's two more.
It's kind of peculiar in butadiene, all of the nodes, they fall in-between.
Oh man I got, the Molecular Orbital Blues!

The HOMO has one node, the LUMO has two,
ψ2 is antisymmetric with respect to C2.
And this cycloaddition, now how does that go?
You know what it is… it's HOMO-LUMO!

It ain't so confusin', if you learn ya some rules,
Woodward and Hoffmann, those guys were no fools!
Is it permitted? Is it 4n+2?, I think I got it, I'm no longer Blue!
I think I'm over, my Molecular Orbital Blues!