Your Name: 🚽 NSWER KEY [printed]

"On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."

[signature]

## Quiz #9, April 3, 2014, 10 pts Polymer Chemistry, CHEM 466, Spring 2014 Texas A&M University, College Station, TX, USA

Provide an electron arrow-pushing mechanism for the following polymerization [5 points] and the chemical structure for the final polymer [3 points]. Also, state what type of polymerization it is, in general, and its specific named reaction type [2 points]

|          | $\begin{array}{c} Br \\ + \\ \end{array}$   |
|----------|---|
| (        | 11<br>101 total   |
| Twheshir | + CuBrzLxc  |
|          | Hit + Cubrick Promotion   |
|          | Propagation<br>Propagation<br>Propagation<br>Propagation<br>Br<br>enmatrin<br>Br<br>+ CuBrLy  |
|          | General reaction type: <u>Controlled</u> vadical chain-growth addition polyn<br>Specific reaction name: <u>atom transfer</u> vadical polym (ATRP) |