"Al-ghemist" translated "All is Lost" or "All is Dung" Image from:

http://geneaknowhow.net/in/beroepen/beroep-overig/alchemist.html

This drawing, by Pieter Brueghel, dates to 1558 and is one of the earliest depictions of a chemist. Its salient features are summarized by Lloyd DeWitt (*Chemical Heritage* **2002**, 20 (1), p. 33) based on a lecture to the Chemical Heritage Foundation given by Jane Russell Corbett:

"[The] alchemist at the hearth, dropping his last gold coin into the crucible. Behind him, his gaunt wife displays her empty purse while the children play in the bare cupboards. An assistant wears a fool's cap and ass's ears, while another reads a book opened to a page captioned "Al-Ghemist", a pun on the Dutch words for "all is lost" and "all is dung". We see the family again in the background being accepted into the poorhouse. While nearly all subsequent alchemical paintings are based on this composition, later artists gradually eliminate the biting satire on the folly and misfortune of the amateur alchemist."

A web search on this topic turned up the following references to the ethical responsibilities of scientists and engineers by Lord Robert Winston, that I recommend as reading (short summary, top URL; complete essay – the better selection – bottom URL).

http://www.kcl.ac.uk/depsta/rel/festival/lectures/09032000winston.html http://www.scienceyear.com/about_sy/events/pdfs/Robert_Winston_Transcript.pdf

These are his closing words:

"The woodcut shows the alchemist reading his book. His wife is in the center of the room with an empty purse as there are no research grants and his two PhD students are also failing, one with the elixir of life, and one with the transmutation of base metals, also failing The meaning [of the woodcut is seen] through the window. The window in medieval art often means the future. What's happened here is the three children being led ... to the poorhouse. They've been neglected because the alchemist has subsumed, has neglected everything, to pursue his technology. Alchemist is Flemish is a pun. It means alchemist but it also means "all has miscarried", and what the alchemist has done in pursuance of technology is [to forget] the next generation. This is something for science to remember, its responsibility is not only to us now but to people on this planet in time to come."

And lastly, an editorial comment. Where do I get some of my questions? I've already given you the answer. If you have any interest in the history of chemistry, support the CHF (www.chemheritage.org)!!