Distinguished guests,

Ladies and gentlemen,

It is an honour for me to address this distinguished gathering.

Allow me to say first of all how grateful I am to Professor Luigi Campanella for his kind invitation to address the opening ceremony of this important conference. I would also like to take this opportunity to acknowledge the consistent and staunch support of Italy to the Chemical Weapons Convention and to the work of the Organisation for the Prohibition of Chemical Weapons.

2011, as you all know, was commemorated as the International Year of Chemistry. This was a due recognition of the prosperity and progress that chemistry has brought to humankind. It was also an appropriate tribute to the men and women who devoted their lives to the advancement of this science. The activities of the OPCW do not directly involve the kinds of activities normally associated with chemistry, such as research that brings us so many products and conveniences of every day life.

Yet, we perform no less an important function. We strive in the way of peace seeking to ensure that chemistry remains at the service of humanity and does not become its adversary. This goal is not a new one. It was born the day chemistry was abused to produce weapons of great destruction and cruelty. Yet it took almost a century to find a decisive and comprehensive solution to the problem of chemical weapons. Today these weapons stand totally prohibited. It is part of the mandate and the responsibility of the OPCW to also keep alive the historic memory of those that suffered the terrible consequences of chemical weapons. The resolve born of the long and bitter experience of chemical weapons is today reflected in the CWC. It is our mission to implement the global prohibition on chemical weapons while continuing to remind the international community of the potential for harm, suffering and destruction that they can cause.

The Organisation's motto "Working together for a world free of chemical weapons" captures the essence of our mission and our message to the world – we must work relentlessly and collectively to ensure the success of this mission and make it endure for all times to come. Collective responsibility implies the work of all citizens of the world and not just their governments. The responsibility is especially significant for people like yourselves.

As scientists and educators you have a key role to play in this joint endeavour.

Every science bears within it the potential for both benefit and harm. As the American geneticist Matthew Meselson pointed out: "Every major technology — metallurgy, explosives, internal combustion, aviation, electronics, nuclear energy — has been intensively exploited, not only for peaceful purposes but also for hostile ones." Chemistry has been no different**.** The terrible suffering unleashed by chemical weapons during World War I remains a powerful memory. More recently, chemical weapons were used extensively in the Middle East in the 1980s. The use of chemical weapons by terrorists in Japan in the 1990s underscores the existence of the threat even as military arsenals are eradicted.

It is our collective responsibility to create permanent safeguards to ensure that an instrument of human progress is not turned into a vehicle for mass destruction. I am a firm believer in the importance of chemistry in our everyday lives. I fully agree with Professor Peter Atkins who said last year that "Without chemistry's contributions, the world would lack colour; we would live in Stone Age conditions, underfed, dressed in skins, without the many devices that ease our lives and entertain us; and our lives would be short and painful." However, I also agree with Professor Atkins that, like any science, the application of chemistry has a downside as well as an upside.

One way in which to limit this downside is by raising awareness of the multiple uses to which chemistry can be put and of the ethical responsibilities on chemists to avoid their work being used to cause harm. This is one of the reasons that I am here today; to recall that while you are all engaged in legitimate, peaceful uses of chemistry and transmitting knowledge on to the future generations, they must be made aware of the potential of science to be perverted and misused.

The international community has spent many years negotiating an international treaty containing a comprehensive prohibition on the development, production, stockpiling and use of chemical weapons, the Chemical Weapons Convention. The singular purpose in the words of the Convention is: “for the sake of all mankind, to exclude completely the possibility of the use of chemical weapons”. This Convention entered into force in 1997, and created the implementing agency – the OPCW.

In comprehensively outlawing chemical weapons, the Convention places two key obligations on its States Parties – to destroy any existing chemical weapons which they may possess; and to take measures to ensure that chemical weapons cannot re-emerge in the future. I will now very briefly describe progress in meeting these obligations by our membership of 188 States Parties.

With respect to our disarmament mission, the key achievement of the OPCW is that nearly three-quarters of the declared global stockpile of chemical weapons has been destroyed under international monitoring. In addition, 65 of the 70 chemical weapons production facilities declared to the OPCW have been destroyed or converted to peaceful uses, while the remainder are awaiting destruction or conversion or have already been permanently deactivated. Three of the seven States Parties which originally declared chemical weapons have fulfilled their destruction obligations, and those with chemical weapons remaining are progressing towards their total elimination.

Preventing the future re-emergence of chemical weapons is also a core objective of the OPCW. For this mission, our industry verification regime is crucial. States Parties are required to declare to the OPCW certain industrial facilities and, respecting specific conditions and thresholds**,** the OPCW conducts inspections of these declared facilities**.** These facilities are those working with certain chemicals listed in the "Schedules" of the Convention which have either been used in the past as chemical weapons or which are precursors to chemical weapons**.**

To date**,** over 2,200 inspections have been conducted in the global chemical industry in more than 80 States Parties. Also vital for our prevention mission**,** is the establishment in each State Party of an effective national monitoring system. Each State Party is required to set up a national focal point to liaise with other States Parties and with the OPCW, (and to pass appropriate laws and regulations to ensure that the prohibitions in the Convention are incorporated into national law).

Our disarmament mission has progressed well. The fact that since 1997 chemical weapons have not threatened international peace can be attributed to the authority of the Convention gaining wider acceptance internationally. However, we cannot afford to be complacent. Destruction of existing weapons needs to be completed and non-proliferation measures strengthened. There are also concerns that some of the eight States yet to join our Convention could still possess chemical weapons. We, therefore, must not spare any effort in convincing them to join the vast majority of the international community.

With an eye to the future, we also need to ensure that awareness of the Convention is promoted widely amongst the relevant communities. I am a strong believer that herein lies an important role for the education sector. We often describe the Convention as a "living" treaty. This means that future generations

must be made aware of its relevance for all times to come and in all their scientific work. This is imperative for global peace and security.

Therefore I am very keen for the OPCW to become more actively involved in global chemistry education to ensure that, in the words of the Convention, "achievements in the field of chemistry should be used exclusively for the benefit of mankind." In this context our relationship with the International Union of Pure and Applied Chemistry is noteworthy. IUPAC's core objectives revolve around strengthening international chemistry. It seeks high standards of excellence and relevance in academic and industrial research. It also aims to promote the service of chemistry to society and to global issues, and it is this vision that lays the basis for our partnership with IUPAC. IUPAC has been a strong and valuable partner in past OPCW education efforts and I would like to recognise those present here today who have been involved in such efforts. In 2005, IUPAC and the OPCW jointly organised a meeting on education, outreach and codes of conduct to further the acceptance of the norms and obligations of the Convention. Following the meeting, IPUAC and the OPCW jointly produced teaching materials on the multiple uses of chemicals, which are available on the internet.

In order to ensure that OPCW activities in this area are most effective, last year I requested our Scientific Advisory Board to establish a temporary working group on education and outreach. The group consists of 12 experts from around the world, several of whom are present at this conference. The objectives of the group are to build on earlier work in this area by the Scientific Advisory Board and its members, to utilise the experience of other initiatives in this field and related areas. The group has also to make recommendations to the Board for sustainable activities which could be pursued by the OPCW and its Member States. Stimulated by members of the working group, we are now also working with local educators in the Netherlands to develop teaching materials and we

have already produced a short film about a Dutch chemistry teacher who teaches his students about the ethical issues surrounding chemical weapons. We are also cooperating with other international organisations that have similar activities in other scientific disciplines such as physics and the life sciences.

Ladies and gentlemen,

Everyone engaged in the use of chemicals and chemical technology should understand the intent of the Convention – to recognize what aspects of chemicals it prohibits and to appreciate the much broader applications of chemistry that it not only allows but encourages. It is in the context that the OPCW promotes the peaceful use of chemistry through different programmes. Everybody engaged in the use of chemicals and chemical technology should realize that the CWC might apply to them – chemicals per se are not good or bad but even chemicals and technologies intended for the best of purposes could be misused.

A total ban on chemical weapons is no small achievement for the international community. We will continue to strengthen this norm in order to keep our future generations safe from this scourge which has in the past brought death and untold suffering. My message to you is to join this endeavour; to spread the word. To use your considerable expertise, influence and good will to ensure that the norms and values that we share are more widely known and supported. To guarantee through your work with students that the chemist will always work for the betterment of the community and never use his or her knowledge and skills to bring harm to fellow human beings.

I thank you for your attention.