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Chapter 1 : Top 10 papers from Physical Review's first years | Science News

J. Robert Oppenheimer Papers 5 Correspondence containing scientific calculations was written by such prominent physicists as Hans A. Bethe, Shuichi Kusaka, Wolfgang Pauli, Julian Schwinger, and Edward Teller.

Atomic Bomb Harold Urey and the Politics of the Nuclear and Space Age Urey, who won a Nobel prize in chemistry in 1934 for his discovery of heavy hydrogen, was involved in the making of atomic bomb, campaigned for its civilian and international control in 1945, pushed for the making of the H-bomb in 1949, and then again for the nuclear test ban in 1958. He was also known as a strong supporter of the Apollo moon landing project in the 1960s when many other scientists opposed it as lacking scientific content. Why did he break his commitment to arms control to support the H-bomb and what motivated his active participation in science and public policy? Most people think of the rise of biology over physics as a post-Cold War phenomenon. But if you examine the newspaper and magazine articles in the late 1940s and 1950s you will discover that scientists were already talking about molecular biology and genetic research as the leading edge of science. Mao Zedong and the Chinese atomic bomb: How did American presidents react to national crises? No matter what the exertions or sacrifices, we shall maintain that necessary strength! But we could make no more tragic mistake than merely to concentrate on military strength. For if we did only this, the future would hold nothing for the world but an Age of Terror. And so our second task is to do the constructive work of building a genuine peace. We must never become so preoccupied with our desire for military strength that we neglect those areas of economic development, trade, diplomacy, education, ideas and principles where the foundations of real peace must be laid. In a democratic society, should the question of the ends of science be handled by the elected officials, and not scientists themselves? How did scientists feel about this issue? Robert Oppenheimer in terms of the power of science, through nuclear weapons, to force nations to give up some sovereignty and work for international peace. Relations between Oppenheimer and Albert Einstein. Eisenhower, for example, appointed a presidential commission that recommended US technical aid to foreign countries in the area of birth control but he refused to endorse the recommendation amidst the election. Two years later, however, he and Truman both publicly supported birth control. How did scientists and presidents shape birth control policy? The White House as a Policy Showcase: On June 29, President Obama announced that he had requested Steven Chu, his secretary of energy, to take a look at the White House and come up with recommendations on how to make its lights more energy efficient. In the 1970s, President Lyndon Johnson went to great length to make sure his staff turned off lights late in the night as a way to save energy and money. In the 1980s, President Jimmy Carter installed some kind of solar or nuclear? Write a paper on how the physical White House was used as a way to showcase administration policy. Use her life and experiences to explore how women scientists were discriminated against and how they fought back. Nobel Science Laureates in the Public Arena: When the US senate debated whether the US should ratify the Limited Test Ban Treaty in 1963, a group of Nobel science laureates signed a statement in support of the treaty. It is often regarded as one of the earliest collective actions by Nobel science laureates. Variations of this topic and related tips: You can search for other groups' Nobel literature laureates, university presidents, religious leaders, etc. US history and history of science and technology: A historical study on the use of online training by institutions for the purpose of compliance with federal laws, e. Topics in history of modern science in China: Debates over the relationship between scientists and scientific research in universities and those in the Chinese Academy of Sciences. For most of these topics, you should be able to use newspaper and magazine articles from the period covered as your primary sources, in addition to other kinds of primary and secondary sources. The two best sources for newspaper articles are the historical New York Times and the historical Los Angeles Times. Yet another useful database is the Declassified Documents Reference System which contains declassified documents related to the history of the atomic bomb and the Cold War. Our library does not yet subscribe to this database but you can access it at any UC library. You get the citations and then go to the second floor to find the magazines and you can make

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Chapter 2 : List of Famous Medical Scientists - Biographies, Timelines, Trivia & Life History

J. ROBERT OPPENHEIMER he spent at Cambridge University, where he was exposed to the great personality of Lord Rutherford. It was the time when Heisenberg, Born and Schroedinger were developing.

What science said about global cooling Posted on 26 February by John Cook A persistent argument designed to discredit the field of climate science is that scientists predicted an ice age in the 1970s. So popular in fact that it ranks an impressive 7 in the most cited skeptic arguments. The logic goes that climate scientists got it completely wrong predicting global cooling in the 1970s it started warming instead. Setting aside the logical flaws of such an ad hominem argument, was there any consensus among 1970s climate scientists predicting global cooling? The evidence for global cooling consensus Most cited is a Newsweek article The Cooling World that suggested cooling "may portend a drastic decline for food production": The trend shows no indication of reversing. Climatological Cassandras are becoming increasingly apprehensive, for the weather aberrations they are studying may be the harbinger of another ice age. Does a consensus on global cooling emerge from the scientific literature? Skeptical quote mining of scientific literature Most mentioned is Rasool which projected that if aerosol levels increased 6 to 8 fold, it may trigger an ice age. While Rasool underestimated climate sensitivity to CO₂, its basic assertion that the climate would cool with a dramatic increase of aerosols was correct. However, aerosol levels dropped rather than increased. However, it is possible, or even likely, that human interference has already altered the environment so much that the climatic pattern of the near future will follow a different path. Skeptic citing of the scientific literature have taken conclusions out of context, overlooking qualifications and stated uncertainties. What does a broader look at the scientific literature reveal? A new paper exposing the myth of 1970s global cooling Over time, William Connelly has been steadily documenting 1970s research predicting global cooling. The paper surveys climate studies from 1970 to 2010 and in a refreshing change to other similar surveys, lists all the papers. They find very few papers 7 in total predict global cooling. What surprises is that even in the 1970s, on the back of 3 decades of cooling, more papers 42 in total predict global warming due to CO₂ than cooling. Number of papers classified as predicting future global cooling blue or warming red. In no year were there more global cooling papers than global warming papers. So in fact, the large majority of climate research in the 1970s predicted the Earth would warm as a consequence of CO₂. Rather than climate science predicting cooling, the opposite is the case. A must read paper.

Chapter 3 : Oppenheimer Research Fellowship at University of Cambridge

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Julius came to America with no money, no baccalaureate studies, and no knowledge of the English language. He got a job in a textile company and within a decade was an executive with the company. Ella was from Baltimore. His father had been a member of the Society for many years, serving on its board of trustees from to To help him recover from the illness, his father enlisted the help of his English teacher Herbert Smith who took him to New Mexico, where Oppenheimer fell in love with horseback riding and the southwestern United States. He compensated for his late start by taking six courses each term and was admitted to the undergraduate honor society Phi Beta Kappa. In his first year, he was admitted to graduate standing in physics on the basis of independent study, which meant he was not required to take the basic classes and could enroll instead in advanced ones. He was attracted to experimental physics by a course on thermodynamics that was taught by Percy Bridgman. He graduated summa cum laude in three years. Oppenheimer is in the second row, third from the left. He wrote to Ernest Rutherford requesting permission to work at the Cavendish Laboratory. Rutherford was unimpressed, but Oppenheimer went to Cambridge in the hope of landing another offer. Thomson on condition that he complete a basic laboratory course. Many of his friends described him as having self-destructive tendencies. A disturbing event occurred when he took a vacation from his studies in Cambridge to meet up with Fergusson in Paris. Fergusson noticed that Oppenheimer was not well. To help distract him from his depression, Fergusson told Oppenheimer that he Fergusson was to marry his girlfriend Frances Keeley. Oppenheimer did not take the news well. He jumped on Fergusson and tried to strangle him. Throughout his life, Oppenheimer was plagued by periods of depression, [22] [23] and he once told his brother, "I need physics more than friends". He was known for being too enthusiastic in discussion, sometimes to the point of taking over seminar sessions. Born left it out on his desk where Oppenheimer could read it, and it was effective without a word being said. He was on the point of questioning me. He and Born published a famous paper on the Born- ϵ Oppenheimer approximation, which separates nuclear motion from electronic motion in the mathematical treatment of molecules, allowing nuclear motion to be neglected to simplify calculations. It remains his most cited work. Bridgman also wanted him at Harvard, so a compromise was reached whereby he split his fellowship for the ϵ 28 academic year between Harvard in and Caltech in Both the collaboration and their friendship were nipped in the bud when Pauling began to suspect Oppenheimer of becoming too close to his wife, Ava Helen Pauling. Once, when Pauling was at work, Oppenheimer had arrived at their home and invited Ava Helen to join him on a tryst in Mexico. Though she refused and reported the incident to her husband, [31] the invitation, and her apparent nonchalance about it, disquieted Pauling and he ended his relationship with Oppenheimer. Oppenheimer later invited him to become head of the Chemistry Division of the Manhattan Project, but Pauling refused, saying he was a pacifist. There he was given the nickname of Opje, [33] later anglicized by his students as "Oppie". Oppenheimer respected and liked Pauli and may have emulated his personal style as well as his critical approach to problems. Birge wanted him so badly that he expressed a willingness to share him with Caltech. When he heard the ranch was available for lease, he exclaimed, "Hot dog! His students and colleagues saw him as mesmerizing: His associates fell into two camps: Probably the most important ingredient he brought to his teaching was his exquisite taste. He always knew what were the important problems, as shown by his choice of subjects. He truly lived with those problems, struggling for a solution, and he communicated his concern to the group. In its heyday, there were about eight or ten graduate students in his group and about six Post-doctoral Fellows. He was interested in everything, and in one afternoon they might discuss quantum electrodynamics, cosmic rays, electron pair production and nuclear physics. Lawrence and his cyclotron pioneers, helping them understand the data their

machines were producing at the Lawrence Berkeley National Laboratory. In return he was asked to curtail his teaching at Caltech, so a compromise was reached whereby Berkeley released him for six weeks each year, enough to teach one term at Caltech. The formal mathematics of relativistic quantum mechanics also attracted his attention, although he doubted its validity. His work predicted many later finds, which include the neutron, meson and neutron star. He developed a method to carry out calculations of its transition probabilities. He calculated the photoelectric effect for hydrogen and X-rays, obtaining the absorption coefficient at the K-edge. His calculations accorded with observations of the X-ray absorption of the sun, but not helium. Years later it was realized that the sun was largely composed of hydrogen and that his calculations were indeed correct. Subsequently, one of his doctoral students, Willis Lamb, determined that this was a consequence of what became known as the Lamb shift, for which Lamb was awarded the Nobel Prize in Physics in 1955. When Ernest Lawrence and Edwin McMillan bombarded nuclei with deuterons they found the results agreed closely with the predictions of George Gamow, but when higher energies and heavier nuclei were involved, the results did not conform to the theory. In 1938, Oppenheimer and Phillips worked out a theory now known as the Oppenheimer-Phillips process to explain the results, a theory still in use today. He argued that they would have to have the same mass as an electron, whereas experiments showed that protons were much heavier than electrons. In the first of these, a paper co-written with Robert Serber entitled "On the Stability of Stellar Neutron Cores", [50] Oppenheimer explored the properties of white dwarfs. This was followed by a paper co-written with one of his students, George Volkoff, "On Massive Neutron Cores", [51] in which they demonstrated that there was a limit, the so-called Tolman-Oppenheimer-Volkoff limit, to the mass of stars beyond which they would not remain stable as neutron stars and would undergo gravitational collapse. Finally, in 1939, Oppenheimer and another of his students, Hartland Snyder, produced a paper "On Continued Gravitational Attraction", [52] which predicted the existence of what are today known as black holes. After the Born-Oppenheimer approximation paper, these papers remain his most cited, and were key factors in the rejuvenation of astrophysical research in the United States in the 1930s, mainly by John A. Wheeler. He was fond of using elegant, if extremely complex, mathematical techniques to demonstrate physical principles, though he was sometimes criticized for making mathematical mistakes, presumably out of haste. Murray Gell-Mann, a later Nobel laureate who, as a visiting scientist, worked with him at the Institute for Advanced Study in Princeton, offered this opinion: As far as I know, he never wrote a long paper or did a long calculation, anything of that kind. But he inspired other people to do things, and his influence was fantastic. In 1935, he learned Sanskrit and met the Indologist Arthur W. Llewellyn. He read the Bhagavad Gita in the original Sanskrit, and later he cited it as one of the books that most shaped his philosophy of life. Oppenheimer was overeducated in those fields, which lie outside the scientific tradition, such as his interest in religion, in the Hindu religion in particular, which resulted in a feeling of mystery of the universe that surrounded him like a fog. He saw physics clearly, looking toward what had already been done, but at the border he tended to feel there was much more of the mysterious and novel than there actually was. He claimed that he did not read newspapers or listen to the radio, and had only learned of the Wall Street crash of some six months after it occurred while on a walk with Ernest Lawrence. However, from 1935 on, he became increasingly concerned about politics and international affairs. Oppenheimer repeatedly attempted to get Serber a position at Berkeley but was blocked by Birge, who felt that "one Jew in the department was enough". He donated to many progressive efforts which were later branded as "left-wing" during the McCarthy era. The majority of his allegedly radical work consisted of hosting fundraisers for the Republican cause in the Spanish Civil War and other anti-fascist activity. He never openly joined the Communist Party, though he did pass money to liberal causes by way of acquaintances who were alleged to be Party members. The two had similar political views; she wrote for the Western Worker, a Communist Party newspaper. Kitty had been married three times previously. Her first marriage lasted only a few months. Her second, common-law marriage husband was Joe Dallet, an active member of the Communist party, who was killed in the Spanish Civil War. There she married Richard Harrison, a physician and medical researcher, in 1942. In June Kitty and Harrison moved to Pasadena, California, where he became chief of radiology

at a local hospital and she enrolled as a graduate student at the University of California, Los Angeles. In the summer of she stayed with Oppenheimer at his ranch in New Mexico. She finally asked Harrison for a divorce when she found out she was pregnant. When he refused, she obtained an instant divorce in Reno, Nevada , and took Oppenheimer as her fourth husband on November 1, At his security clearance hearings, he denied being a member of the Communist Party, but identified himself as a fellow traveler , which he defined as someone who agrees with many of the goals of Communism, but without being willing to blindly follow orders from any Communist party apparatus. He was followed by Army security agents during a trip to California in June to visit his former girlfriend, Jean Tatlock, who was suffering from depression. Oppenheimer spent the night in her apartment. On July 20, , he wrote to the Manhattan Engineer District: In accordance with my verbal directions of July 15, it is desired that clearance be issued to Julius Robert Oppenheimer without delay irrespective of the information which you have concerning Mr Oppenheimer. He is absolutely essential to the project. Roosevelt approved a crash program to develop an atomic bomb. He was given the title "Coordinator of Rapid Rupture", specifically referring to the propagation of a fast neutron chain reaction in an atomic bomb. One of his first acts was to host a summer school for bomb theory at his building in Berkeley. The mix of European physicists and his own studentsâ€™a group including Robert Serber, Emil Konopinski , Felix Bloch , Hans Bethe and Edward Teller â€™busied themselves calculating what needed to be done, and in what order, to make the bomb. Oppenheimer left gave his farewell speech as director on this occasion. Robert Gordon Sproul right, in suit, accepted the award on behalf of the University of California from Leslie Groves center. The fact that he did not have a Nobel Prize, and might not have the prestige to direct fellow scientists, did concern Groves. As a military engineer , Groves knew that this would be vital in an interdisciplinary project that would involve not just physics, but chemistry, metallurgy , ordnance and engineering. Groves also detected in Oppenheimer something that many others did not, an "overweening ambition" that Groves reckoned would supply the drive necessary to push the project to a successful conclusion. Isidor Rabi considered the appointment "a real stroke of genius on the part of General Groves, who was not generally considered to be a genius". Scouting for a site in late , Oppenheimer was drawn to New Mexico, not far from his ranch. On November 16, , Oppenheimer, Groves and others toured a prospective site. Oppenheimer feared that the high cliffs surrounding the site would make his people feel claustrophobic , while the engineers were concerned with the possibility of flooding.

Chapter 4 : List of science and technology awards - Wikipedia

Early life Childhood and education. Oppenheimer was born in New York City on April 22, 1927, to Julius Oppenheimer, a wealthy Jewish textile importer who had immigrated to the United States from Germany in 1913, and Ella Friedman, a painter.

The paper states that all non-Africans descend from a single group of humans that left Africa by a coastal route across the mouth of the Red Sea to South Asia This disproves current theories - which argue for several successful exits via different routes and at different times, including a direct northern route to Europe 45,000 years ago. One or more exits from Africa? South A commonly held view has been that modern humans left Africa both round the north and the south of the Red Sea in several waves to populate Europe and Asia. The research shows that there was only a single dispersal from Africa, via a southern coastal route, across the mouth of the red Sea, through India and onward into Southeast Asia and Australasia. There was subsequently a northern offshoot from the Gulf region, leading ultimately to the settlement of the Near East and Europe, but this only occurred much later. MtDNA passes from mother to child, each generation, unchanged, therefore every person alive on the Earth today has inherited this small collection of genes from one single great-great-great-grandmother, nearly two hundred thousand years ago. There are occasional mutations in the mtDNA molecule, enabling the tracing of migrations of people. This trail of maternal inheritance is backed up by the Y-chromosomes passed only down the male line. There was one exodus from Africa via an earlier southern route 60 to 80 thousand years ago that led to the peopling of the rest of the planet. Modern humans only reached Europe the long way round, via Southern Arabia, with this retarded movement into Europe taking place approximately 50,000 years ago. Malaysian tribes provide a living link to the route pursued east after the exodus across the Red Sea, as modern humans beachcombed their way to Australia over several thousand years. Early Europeans were not the first to learn to paint, carve, develop complex culture and speak, and do not represent a major biological advance. Abstract A recent dispersal of modern humans out of Africa is now widely accepted, but the routes taken across Eurasia are still disputed. We show that mitochondrial DNA variation in isolated "relict" populations in southeast Asia supports the view that there was only a single dispersal from Africa, most likely via a southern coastal route, through India and onward into southeast Asia and Australasia. There was an early offshoot, leading ultimately to the settlement of the Near East and Europe, but the main dispersal from India to Australia 65,000 years ago was rapid, most likely taking only a few thousand years. Our analyses of complete mitochondrial DNA sequences from Onges and Great Andaman populations revealed two deeply branching clades that share their most recent common ancestor in founder haplogroup M, with lineages spread among India, Africa, East Asia, New Guinea, and Australia. This distribution suggests that these two clades have likely survived in genetic isolation since the initial settlement of the islands during an out-of-Africa migration by anatomically modern humans. In contrast, Nicobarese sequences illustrate a close genetic relationship with populations from Southeast Asia. Peter Forster and Shuichi Matsumura Abstract When the first early humans ventured out of Africa, which way did they go? Studies of maternally inherited mitochondrial DNA are revealing the excursion choices of our earliest ancestors. In their Perspective, Forster and Matsumura discuss two new studies of the mitochondrial DNA of the indigenous peoples of Malaysia and the Andaman islands Macaulay et al. These studies suggest that the earliest humans took a southern route along the coastline of the Indian Ocean before fanning out over the rest of the world. Or did our ancestors instead depart from East Africa, crossing the Red Sea and then following the coast of the Indian Ocean 11? Oppenheimer, Out of Eden Constable, London,

This recent paper published in 'Science' by Vincent Macaulay and an international team of researchers including Professor Stephen Oppenheimer of Green College, Oxford, and a member of the Bradshaw Foundation Advisory Board, provides irrefutable evidence of the early timing and southern location of the only migration out of Africa to succeed and give rise to all modern non-African peoples.

Noted as director of the Los Alamos laboratory during the development of the atomic bomb. Director of the institute for advanced study Princeton Biography J. His father was a German immigrant who had made his fortune importing textiles, and his mother was an American-born painter who had studied in Paris. Robert and his brother, Frank, were raised in a comfortable, upper-middle class fashion, and both attended the Ethical Culture School from grammar school through high school. He not only studied math and the sciences, but also Greek, Latin, French, and German, and graduated in He took math and science classes, but also enthusiastically studied Greek, Latin, French, and German. He had a feel for languages and often learned one quickly just to read something in its original language. He learned Dutch in six weeks in order to give a technical talk in the Netherlands. He also maintained an interest in classics and eastern philosophy throughout his life. Oppenheimer attended Harvard University for his undergraduate studies. Besides excelling in physics and chemistry, he continued to study languages, published poetry, and developed an interest in Oriental philosophy. He was always an intense person, tall, thin, contemplative, and probing. He was on the point of questioning me. He was an extraordinary teacher and an excellent theoretician. His analyses predicted many later finds, such as the neutron, positron, meson, and neutron stars. Absorbed in his studies and the theoretical world of physics, he was often somewhat distracted from the "real world. By , Niels Bohr brought news to the U. The implication that the Nazis could develop extremely powerful weapons prompted President Roosevelt to establish the Manhattan Project in In June , Robert Oppenheimer was appointed its director. There he brought the best minds in physics to work on the problem of creating an atomic bomb. In the end he was managing more than three thousand people, as well as tackling theoretical and mechanical problems that arose. This prompted President Roosevelt to fund the Manhattan Project, a project designed to insure that the United States harnessed nuclear power first. In , he consolidated research from a variety of locations into a new laboratory on the plateau of Los Alamos, New Mexico. The blast was comparable to 20, tons of dynamite. Oppenheimer said, "We knew the world would not be the same. He opposed the development of even more powerful bombs, and after President Truman did approve the hydrogen bomb, Oppenheimer found the political atmosphere had turned against him. In , his security clearance was revoked and his contract with the Atomic Energy Commission was canceled. The scientific community rallied to his support and he became a symbol of a scientist trying to resolve moral problems arising out of scientific discoveries. His final years were focused on the relationship between science and society. Within a month, two atomic bombs were dropped on Japanese cities. Japan surrendered on August 10, After the war, Oppenheimer chaired the U. He opposed developing an even more powerful hydrogen bomb. When President Truman finally approved it, Oppenheimer did not argue, but his initial reluctance and the political climate turned against him. In , at the height of U. He had, in fact, had friends who were communists, mostly people involved in the antifascist movement of the thirties. He held the academic post of director of the Institute of Advanced Study at Princeton, and in the last years of his life, he thought and wrote much about the problems of intellectual ethics and morality. He died of throat cancer in In Oppenheimer selected the Los Alamos site for the laboratory. McCarthy of Wisconsin, the federal Personnel Security Board withdrew his military security clearance. Oppenheimer thus became the worldwide symbol of the scientist who becomes the victim of a witch-hunt while trying to solve the moral problems rising out of scientific discoveries.

Chapter 6 : Works by Michael Oppenheimer - PhilPapers

Oppenheimer thus became the worldwide symbol of the scientist who becomes the victim of a witch-hunt while trying to solve the moral problems rising out of scientific discoveries. His clearance was reinstated by President Lyndon Johnson in , and he was given the Enrico Fermi Award of the Atomic Energy Commission.

By David Oppenheimer Jun. This is in no small part due to the personal and professional development you gain from the exposure to in-depth, experiential learning. And in addition to learning new research skills, communicating your results, and making a discovery to solve a problem or answer a question, you have the opportunity to earn a recommendation letter to support future applications for graduate school and graduate fellowships. However, if you are early in your undergraduate career, you may not need that letter until a few years after your summer research experience. Sure, you could come back to your mentor after that time and request a recommendation, but that approach has some major disadvantages. How did they demonstrate perseverance? Was this the student who worked out the problem with the actin assay, or was it the student who stayed all night to help an ill labmate finish an experiment? Unfortunately, those same details become more challenging to remember as time passes, new students join my lab, and new research projects are pursued. So, as a summer research student, you need a strategy to cut the lag time between your departure from the lab and the first recommendation letter your summer research mentor writes for you. You want her to put her fingers on the keyboard while the details of your efforts and accomplishments are easy for her to recall. My suggestionâ€”which I recommend to all of my undergraduate lab membersâ€”is simple: Apply for a scholarship, fellowship, or award of some type that requires a recommendation letter and has a deadline in the fall or spring after your summer research. Once, an undergraduate asked me to write a letter for a scholarship that required second-year graduate student status. Once you find an appropriate scholarship to apply for, you have a specific reason to ask your mentor for a letter. And once she writes the first letter for you, she will have a template to update for future letters, which increases the chance that an overcommitted professor will find the time to prioritize additional letters you will need as your training progresses. Asking for the letter When I sit down to write a recommendation letter, the first thing I do is review the research overview that I require all of my students to write. This description of four to seven things they gained from their research experiences helps remind me of their most noteworthy accomplishments and jogs my memory about the contributions they made to my research program, which helps me write a strong letter. To help your prospective letter writer, write your own overview a week or 2 before the end of your summer research experience. Think of it not as bragging, but as an opportunity to remind your mentor how you took ownership of your research project. Your research overview should be more than a list of skills or accomplishments which should be included in an updated CV. It should demonstrate professional and personal growth or unique and noteworthy achievements. Perhaps you struggled to master techniques at the start but you learned to set aside disappointment and be resilient as you overcame technical challenges. Or maybe you learned to embrace the chaotic nature of research instead of being overwhelmed by what seemed to be an endless string of uncontrollable, spontaneous events. Acknowledging the challenges you faced and explaining how you overcame them help convey that you are capable of self-assessment, which both your mentor and future letter readers will value. After you complete your overview, meet with your mentor to discuss the scholarship and request a letter of recommendation. Would you be willing to write a letter of recommendation for me? If, however, your research mentor declines to write a letter, ask if it is due to your performance during the summer. If this is indeed the case, listen carefully to her explanation, even if it is difficult. Negative feedback is tough to hear, but when based on a fair assessment, it can be used as a stepping stone to future success. I later learned that the student thought it was a standard expectation, as he had been asked to write a draft letter by another professor. If yours does, mark the date on your calendar and do not forget to send her the reminder, even if it feels awkward. Keeping in touch The submission of this first letter of recommendation is not the end of your

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relationship. After your mentor submits any recommendation letter, send a short thank you email, even if you thanked her when she first agreed to write the letter. Then if you are awarded the scholarship or fellowship, send a short email update with the good news. She will appreciate hearing about your success, and it will remind her of your qualifications. As you continue with your undergraduate experience, do not lose contact with your summer research mentor. Sending an email update one to three times a year should be enough to maintain a professional connection but not so much that she sends your emails to the spam folder. If you continue with research elsewhere, for example, send a short update about what you are doing or how your current success is related to the training gained in her lab. Maintaining this professional connection with your summer research mentor is important, in part, because it can lead you to new connections and new opportunities. Your mentor will have observed your professional skills and personal strengths, and if you keep in touch, she may alert you to opportunities such as a scholarship or fellowship program, a conference travel award, or an additional summer research program that suits you. Your mentor has life experience; you can benefit from her advice and perspective. And frankly, you simply cannot have too many people in your life who care about your success.

Chapter 7 : Search results for `Robert J. Oppenheimer` - PhilPapers

J. Robert Oppenheimer was born on April 22, , in New York City, to German Jewish immigrants.

Conrad Habicht , Maurice Solovine and Einstein. After graduating in , Einstein spent almost two frustrating years searching for a teaching post. He acquired Swiss citizenship in February , [50] but for medical reasons was not conscripted. Academic career By , he was recognized as a leading scientist and was appointed lecturer at the University of Bern. Einstein was appointed associate professor in From until , he was professor of theoretical physics at the ETH Zurich , where he taught analytical mechanics and thermodynamics. He also studied continuum mechanics , the molecular theory of heat, and the problem of gravitation, on which he worked with mathematician and friend Marcel Grossmann. Max Planck and Walther Nernst visited him the next week in Zurich to persuade him to join the academy, additionally offering him the post of director at the Kaiser Wilhelm Institute for Physics , which was soon to be established. He was officially elected to the academy on 24 July, and he accepted to move to the German Empire the next year. His decision to move to Berlin was also influenced by the prospect of living near his cousin Elsa, with whom he had developed a romantic affair. He joined the academy and thus the Berlin University on 1 April The institute was established on 1 October , with Einstein as its director. In , that prediction was confirmed by Sir Arthur Eddington during the solar eclipse of 29 May Those observations were published in the international media, making Einstein world famous. On 7 November , the leading British newspaper The Times printed a banner headline that read: Travels abroad Albert Einstein at a session of the International Committee on Intellectual Cooperation League of Nations of which he was a member from to Einstein visited New York City for the first time on 2 April , where he received an official welcome by Mayor John Francis Hylan , followed by three weeks of lectures and receptions. He went on to deliver several lectures at Columbia University and Princeton University , and in Washington he accompanied representatives of the National Academy of Science on a visit to the White House. The American is friendly, self-confident, optimistic, and without envy. After his first public lecture, he met the emperor and empress at the Imperial Palace , where thousands came to watch. In a letter to his sons, he described his impression of the Japanese as being modest, intelligent, considerate, and having a true feel for art. In his place, the banquet speech was held by a German diplomat, who praised Einstein not only as a scientist but also as an international peacemaker and activist. He was greeted as if he were a head of state, rather than a physicist, which included a cannon salute upon arriving at the home of the British high commissioner, Sir Herbert Samuel. During one reception, the building was stormed by people who wanted to see and hear him. Travel to the US In December , Einstein visited America for the second time, originally intended as a two-month working visit as a research fellow at the California Institute of Technology. After the national attention he received during his first trip to the US, he and his arrangers aimed to protect his privacy. Although swamped with telegrams and invitations to receive awards or speak publicly, he declined them all. During the days following, he was given the keys to the city by Mayor Jimmy Walker and met the president of Columbia University, who described Einstein as "the ruling monarch of the mind". His friendship with Millikan was "awkward", as Millikan "had a penchant for patriotic militarism," where Einstein was a pronounced pacifist. Carl Laemmle , head of Universal Studios , gave Einstein a tour of his studio and introduced him to Chaplin. They had an instant rapport, with Chaplin inviting Einstein and his wife, Elsa, to his home for dinner. Chaplin speculated that it was "possibly used as kindling wood by the Nazis. He is rolling up his sleeves and holding a sword labeled "Preparedness" by Charles R. He and his wife Elsa returned to Belgium by ship in March, and during the trip they learned that their cottage was raided by the Nazis and his personal sailboat confiscated. Upon landing in Antwerp on 28 March, he immediately went to the German consulate and surrendered his passport, formally renouncing his German citizenship. In April , Einstein discovered that the new German government had passed laws barring Jews from holding any official positions, including teaching at universities. I must confess that the degree of their brutality and cowardice

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came as something of a surprise. He rented a house in De Haan, Belgium, where he lived for a few months. In late July , he went to England for about six weeks at the personal invitation of British naval officer Commander Oliver Locker-Lampson , who had become friends with Einstein in the preceding years. To protect Einstein, Locker-Lampson had two assistants watch over him at his secluded cottage outside London, with photo of them carrying shotguns and guarding Einstein, published in the Daily Herald on 24 July British historian Martin Gilbert notes that Churchill responded immediately, and sent his friend, physicist Frederick Lindemann , to Germany to seek out Jewish scientists and place them in British universities. He had offers from several European universities, including Christ Church, Oxford where he stayed for three short periods between May and June and was offered a 5-year studentship, [] [] but in he arrived at the decision to remain permanently in the United States and apply for citizenship. The two would take long walks together discussing their work. Bruria Kaufman , his assistant, later became a physicist. During this period, Einstein tried to develop a unified field theory and to refute the accepted interpretation of quantum physics , both unsuccessfully.

Chapter 8 : Getting a great recommendation letter | Science | AAAS

A list of medals, prizes, and other awards in the fields of science, technology, engineering and social science.

Melba Phillips, photograph, n. Living in the shadow of the threat of a nuclear war with the Soviet Union induced anxiety among many Americans. While Senator Joseph McCarthy became the public face of fear of homegrown communists, many other paranoid and xenophobic senators participated in the witch hunts. She was called because of her involvement with the Teachers Union. We want our professors back! It was a deliberate expression of the McCarthyism of the time. Her objection to cooperating had been a matter of principle. Phillips did not let her dismissal extinguish her passion for science education. While unemployed, she wrote two textbooks, which became university classroom standards: Melba Phillips and Francis T. Addison-Wesley Publishing Company, Inc. Louis, a teacher-training school. Her appointment came at the behest of Edward Condon who had also been named as a security risk by the House Un-American Activities Committee in the early s. At the institute she developed programs instructing high school teachers about how to teach elementary science and physics. She remained at Washington until when she joined the faculty of the University of Chicago. Among her accomplishments there, she worked to make science accessible to non-science majors. She also made laboratory work an important part of the student experience. She worked to make physics more important to teachers at the high school level in addition to college. This has to do in part with why the Association of Physics Teachers ever got started. Even after her retirement from the University of Chicago, she continued to teach at other schools as a visiting professor. Phillips was awarded more honors than can be mentioned without compiling an extensive list. In , Brooklyn College publicly apologized for firing Phillips, and in created a scholarship in her name. Melba Phillips died on November 8, in Petersburg, Indiana at the age of Phillips was leader among her peers. In a interview, Phillips addressed the problems women face in aspiring to science careers an a interview, stating: We sometimes slip back, but we never quite slip all the way back; or we never slip back to the same place.

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Chapter 9 : Guide to the Gerald J. Oppenheimer CollectionAR

Medical research adds to the existing base of scientific knowledge on health and medicine through experimentation. By studying human diseases and their underlying causes, scientists are able to develop newer drugs or improve existing treatment procedures.

Oppenheimer Research Fellowship at University of Cambridge Posted on November 07, by Admin Applications are invited for a postdoctoral researcher position in nanotechnology to join University of Cambridge. This fellowship is last for 3 years and possible to extend. This position is closed on January 15, The funds for this post are available for 3 years in the first instance. Applications are invited for an Ernest Oppenheimer Early Career Research Fellowship to be held at Cambridge University in Colloid Science as broadly interpreted within the fields of biology, surface chemistry, materials science and nanotechnology. These Fellowships are intended to provide an opportunity for independent research, though the holders usually work in collaboration with an established research group. Applications are encouraged from researchers who will have completed a PhD by 1 October and have spent not more than three years after a PhD viva or defence in post-doctoral research by 1 October The post will be based in Cambridge in an appropriate department. Tenure is for three years commencing from 1 October The stipend range is 32, to 39, A contribution may be made towards travel and removal expenses, and up to 15k p. The Oppenheimer Fellowship cannot be held concurrently with any other paid position, or position which would normally attract a stipend. The list of papers should give the titles of the papers, the complete author list and the name of the journal, and should be numbered, not bulleted. Please ensure that uploaded documents are submitted in a font no smaller than 11 pt. Applications exceeding the specified length CV, including the list of publications, 2 pages; previous and current research, 1 page; proposed research, 3 pages or in a font size smaller than 11 point will not be accepted. If you upload any additional documents which have not been requested, they will not be considered as part of your application. Please note that incomplete applications will not be considered. Please include, in the online application form, the names, addresses and e-mail addresses of two persons only who are willing to give a confidential assessment of your research to the Committee of Management; at least one of these should be an external referee. Please ask these these two referees to write direct to the Acting Secretary, Ms Georgina Fuller, at physicalsciences admin. The References section of the online application form gives an option regarding the stage at which referees are contacted. Please note that, as outlined above, both references need to be sent to physicalsciences admin. Please note that a security check may be required, depending on your research area. The Committee of Management hopes to make a decision by the middle of February The decision of the Committee of Management will be final. It is not possible, given the number of applications received, to provide unsuccessful candidates with feedback. A list of projects recently funded is available. To request this list, please write to Georgina Fuller at physicalsciences admin. Informal enquiries may be directed to Georgina Fuller at physicalsciences admin. Please quote vacancy LA on your application and in any correspondence about this vacancy.