



Sciencefood
INTERNATIONAL
Recipes by Researchers





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Our Researchers recommend international Specialities



A homemade dish can put a smile on one's lips. In most parts of the world, hospitality is more than just a custom. Eating, talking and laughing together connects people from all nations.

There are people from many different countries working at Helmholtz-Zentrum Berlin and enriching each other's lives. Employees and guest researchers from four continents have put together specialities from their home countries for this cookbook. Be inspired by this culinary journey across the globe.

The first edition of the cookbook elicited many a smile from those who received it. We are sure this edition, too, will reward us with just as many beaming faces.

Happy cooking!



231 Since the foundation of HZB in 2009, 231 students have taken part in the annual international summer student program. They spend eight weeks doing research on their own scientific projects - and they travel from very far away: from Israel, Colombia, Afghanistan, Jordan, Russia, Egypt, Italy, Bulgaria, Latvia, Portugal, Turkey...

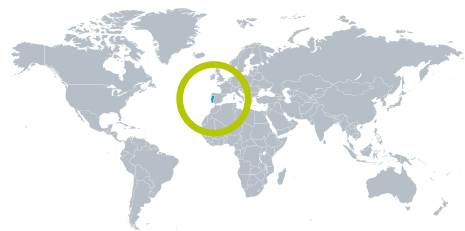


Starters

By Ana Sofia Freire Anselmo from Portugal



“I am currently at the Director’s Office working in International Matters. Before that I was part of the User Coordination team, managing access to our facilities of researchers from all over the world.”



Starters

Peixinhos da Horta

Fake fried fish

Ingredients for 4 persons

500 g flat green beans
2 eggs
100 ml water
150 g flour
salt
pepper
Oil for deep frying

Arroz de Tomate (tomato rice)

1 onion
1 clove of garlic
1 bay leaf
olive oil
2-3 peeled tomatoes
200 g rice

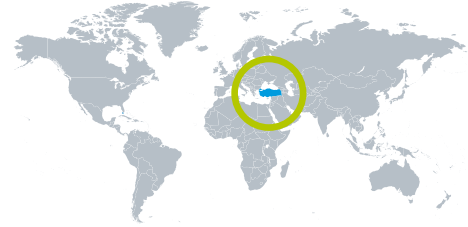
Wash the green beans and cut off the ends. If too long, cut to about 10 to 15 cm-long pieces. Boil in salted water for up to 5 minutes (they should still be firm and slightly undercooked).

Make a thick batter with the eggs, water and flour, and season with salt and pepper. Coat each green bean piece in the batter and deep fry in hot oil until golden. Drain the excess oil over a net or grid.

For the tomato rice: Fry a finely chopped onion and a bay leaf in olive oil. When the onion is translucent, add a chopped garlic clove. Add peeled and diced tomatoes. Let it cook for a bit. Add the rice (a starchy sort) and stir. Then add water (3 times the rice volume), season with salt and let it cook. Remove from the heat while there is still some liquid left.

“Translated literally, it means ‘little fish from the garden’. It’s great as a snack served with a dip, for example aioli. It could also be a light meal if you pair it with Arroz de Tomate.”

Bom apetite!



By Oguz Okay from Turkey

“With a prize from the Alexander von Humboldt Foundation, I spent a year researching organic polymer compounds at HZB. With the so-called self-healing hydrogels, cuts and cracks close by themselves. I want to find out what mechanisms are behind that.”



Imam Bayildi

Stuffed eggplants

Ingredients for 6 persons

- 3 eggplants
- 2 onions
- 2 tomatoes
- 1 bunch parsley
- garlic (*optional*)
- green pepper
- sea salt
- olive oil

Halve the eggplants, sprinkle with sea salt and leave to marinate for 15 minutes. In the meantime, prepare the filling: Chop the onions very finely, salt them, fry them and let them cool a little. Add two finely chopped tomatoes, the chopped garlic and parsley, season with green pepper and mix well.

Take the eggplants, hollow them out with a spoon and fill them with the tomato/onion mixture. Steam the eggplants in a pan with a little olive oil and water until they are soft, remove from the heat and let them cool. Serve Imam Bayildi cold with flat bread.

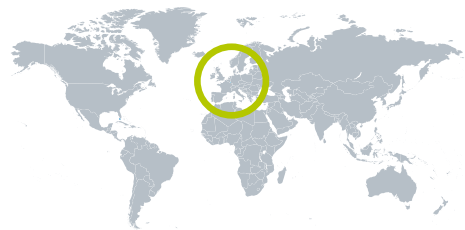
Afiyet olsun!

“The recipe name means ‘the imam passed out.’ Legend has it that the Imam enjoyed the dish so much that he fainted.”

By Anna Manzoni from Luxembourg



“I work on a new class of metallic materials, called high entropy alloys. They stand out by the fact that they do not have a base element. The alloy family I work with will hopefully be used in turbine applications one day.”



Feuerstengszalot

Fire stone salad

Ingredients for 8 persons
500 g cold cooked beef (roast beef or a prime boiled beef like tafelspitz)
2 onions
2 eggs
1 small dill pickle

Sauce
4-6 tbsp oil
1 tbsp brown mustard
fresh parsley
fresh chives
salt
pepper

Decoration
1 egg
capers
tomatoes

Remove fat and gristle from the cooked beef and cut it into cubes about one centimetre in size. Chop an onion. Hard boil the eggs. Cut 2 of them into slices and then cut the slices into strips. Cut the dill pickle into slices and then into strips. Mix the beef with the onions, cucumber and the 2 hard-boiled eggs.

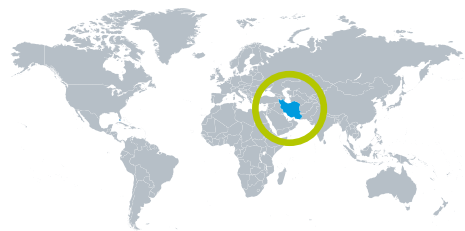
Mix oil, mustard, salt and pepper to a salad dressing. Add the finely chopped parsley and chives - lots of them: don't stint! Toss them together with the beef salad. Let it rest for about 1 hour. Serve the salad - garnished with parsley and chives, the third egg (quartered), tomatoes and capers.

Gudden Appetit!

By Rowshanak Irani from Iran



“I am investigating absorber and catalyst materials for photoelectrodes used in the production of solar fuels. I am trying to determine why photoelectrodes become more efficient after the application of catalysts.”



Starters

کشک بادمجان

Kashke Bademjan

“Kashke Bademjan is a very tasty vegetarian appetizer. It is usually served with bread.”

First fry the peeled eggplants and the chopped onion in separate pans. When both are fried well, mix them and add turmeric and black pepper. Stir and mix well.

Add $\frac{1}{4}$ cup of water, then cover and cook for about fifteen minutes. Mash the mixture well.

Then add kashk, half of the dried mint, the chopped walnuts and the saffron, stir well and cook all of it for about 10 minutes over medium heat. Sautee the chopped garlic and remaining dried mint separately to serve on top of the Kashke Bademjan along with some extra kashk.

Ingredients for 6 persons

- oil
- 4 eggplants
- 1 large onion
- 4 cloves garlic
- $\frac{1}{2}$ tsp turmeric
- $\frac{1}{2}$ tsp black pepper
- $\frac{1}{4}$ cup water
- $\frac{3}{4}$ cup liquid kashk (Iranian yogurt)
- 1 tsp saffron
- 2 tbsp dried mint
- $\frac{1}{2}$ cup chopped walnuts

Nooshe Jan!



By Won Kyu Kim from South Korea

“I come from Seoul and work as a theoretical physicist. I develop models for polymer networks in order to transport dissolved substances and proteins. This would make it possible in future to control the release of active substances in cells.”



오이 무침 Oi Muchim

Korean cucumber salad

Ingredients for 4 persons

- 1 cucumber
- 1½ tbsp salt
- 1 tsp sugar
- 1 tbsp vinegar
- 1 clove of garlic, chopped
- ½ tsp ground black pepper
- 2 tsp sesame oil
- 2 tsp sesame seeds
- 1 tsp chilli flakes
(optional)
- 1 tbsp Korean soy sauce

Cut the cucumber into thin slices and place in a large bowl. Add salt and wait 5 to 10 minutes. Rinse the cucumber with cold water. Add the other ingredients and mix well.





77 PhD students from abroad are researching at HZB and qualifying for a career within and outside the academic world. This means that more than half of the 151 doctoral students come from abroad.

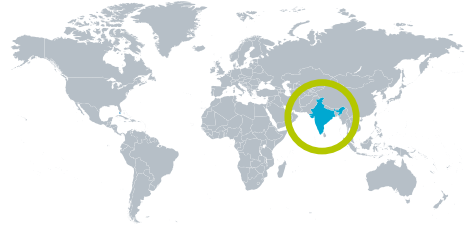


Main Courses



By Sneha Choudhury from India

“I am investigating nanodiamonds. These materials can become interesting as inexpensive catalysts. With sunlight nanodiamonds can be catalytically activated and produce useful fuels from carbon dioxide and water.”



Chingri Machher Malaikari

Prawn curry with coconut milk

Ingredients for 4 persons

- 1 kg large prawns
- 2 onions or 5 tbsp of onion paste
- 1 clove of garlic
- 1 tsp ginger
- 5–6 green chillies or 2–3 thin red chillies
- 400 ml coconut milk
- 130 ml water
- 4 small bay leaves
- 4 pieces of cardamom
- 6 cloves
- 2 small sticks cinnamon
- red chilli powder
- turmeric powder
- sugar
- salt
- oil

Clean the prawns and marinate with turmeric and salt for 30 minutes. Grind the onions to a paste. Heat oil in a deep frying pan and fry the prawns lightly until golden brown, do not deep-fry. Remove the prawns and add the chopped garlic to the oil. Remove the garlic when the oil starts getting the garlic fragrance.

Add bay leaves. Coarsely crush the cardamom, cloves and cinnamon with a pestle and add to the oil. Add the onion paste when the spices start to crackle in the oil.

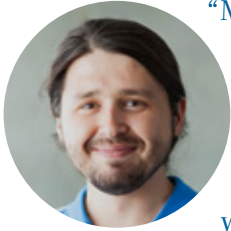
Fry the paste with some sugar until it is brown or the oil separates from the paste. Add the ginger paste and stir the spice mix. Add coconut milk and water (approx. $\frac{1}{3}$ of the tin) and mix well.

Then add red chilli powder, very little turmeric powder and salt. Then add the green or red chillies and let the curry simmer for about 25 to 30 minutes. When the oil surfaces from the gravy, add the prawns and cook on low heat for a while till the curry gets a creamy consistency. Serve the prawn curry with basmati rice.

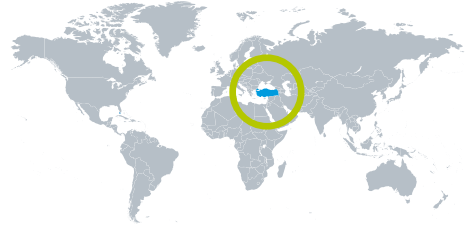
Enjoy your meal!



By İbrahim Şimşek from Turkey



“My research topic is about inorganic perovskites as absorber materials for solar cells. Recently, I have been working on chalcogenide perovskites.”



Biber dolması

Rice-stuffed bell peppers

Ingredients for 5 persons

- 10 bell peppers
- 200 g rice
- 200 g ground meat (beef)
- 2 onions
- 3 tomatoes
- 2 tbsp tomato paste
- ½ cup olive oil
- ½ bunch parsley
- 1 tsp chili powder
- 1 tsp pepper
- ½ tsp cumin
- ½ tsp salt

Afiyet olsun!



Take out the tops of the peppers and remove the seeds. In a saucepan, place the olive oil and the finely chopped onions. Fry lightly. Add the ground meat. When the meat is cooked rare, add two peeled and diced tomatoes and tomato paste, fry them for another 3 minutes. Add the rice and cook for 3 minutes. Then add salt, chopped parsley and cumin. Let simmer until all liquid is evaporated.

Fill the peppers with the mixture. Do not stuff too tightly as the rice will swell. Place a slice of tomato on top of each pepper and place in a saucepan. Fill half way up with water and tomato paste. Close the lid and cook on medium heat for 25-30 minutes.

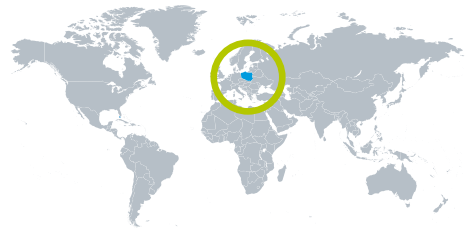
Serve with yoghurt or Cacık (Turkish tzatziki).

“This classic recipe can also be made vegan: Simply double the rice and instead of minced meat, use ½ cup of raisins, a pinch of cinnamon and ½ cup of pine nuts.”



Von Paul Goslawski aus Polen

“I am an accelerator physicist and want to optimize the synchrotron radiation source for our users. We are working on converting BESSY II into a variable pulse length storage ring (BESSY VSR). To do this, we have to manipulate the electron bunches flying in BESSY II and test new operating modes. The concepts developed can become building blocks for a successor source BESSY III.”



Pierogi ruskie

Dumplings with potato and cottage cheese stuffing

Ingredients for 6 persons

Dough

350 g flour

1 egg

130 ml water

Filling

600 g potatoes

250 g cottage cheese

1 onion

Serving with

1 tbsp butter

200 ml sour cream

salt

pepper

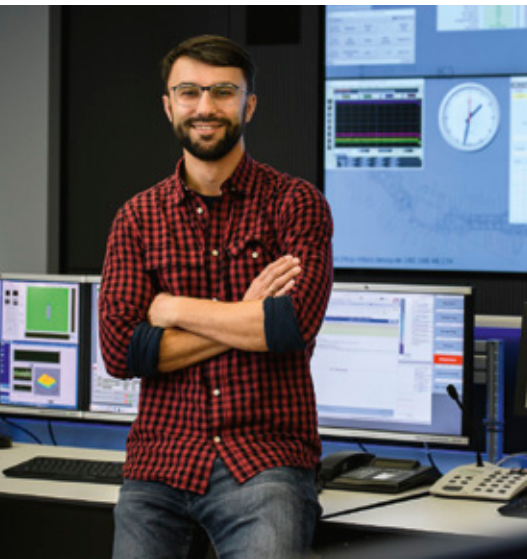
For the filling: Peel the potatoes and boil them in salted water. Mash hot potatoes and mix with cottage cheese. Chop the onion into small pieces and roast until golden brown (can also be done with ham) and stir into the potato quark mixture. Season with salt and pepper. The filling must not contain any potato or quark lumps.

For the dough: Knead flour and egg with water and some salt. Roll out the dough thinly and cut out circles with a large glass. Put a spoonful of filling in the middle of the dough circle. Fold the dough to a half moon and carefully press down the edges.

Boil the dumplings in water. Stir carefully and once they float on the surface let them cook for 2–3 minutes.

Serve with hot butter and sour cream on the side.

Smacznego!



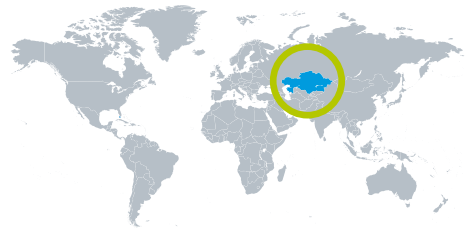


By Margarita Russina from Kazakhstan



“I am the head of the neutron time of flight spectroscopy group at HZB which is operating the neutron spectrometer NEAT.

Our group is investigating confinement processes of ions, liquids and gasses in porous materials.”



“This is one of my favorite dishes which comes from the country I was born in – Kazakhstan –, and is particularly suitable for cold winter days. Besh means ‘five’ and ‘barmak’ means fingers. Since Kazakhs were mostly nomadic in olden times, they would eat this dish with their hands, using all five fingers. Typically it is cooked with either horse meat or lamb, but in our family we cooked it with chicken. The dish is served with a bowl of the broth on the side called sorpa.”



Бешбармак

Beshbarmak · “Five fingers”

Ingredients for 6 persons

1 kg lamb or one good quality fat chicken
1 large onion
1 bay leaf
1 piment or peppercorn
ground pepper
salt
pepper
some parsley and chives

For the noodles (use alternatively lasagna noodles)

1 egg
½ cup water
½ tsp salt
300 g plain flour

Cook the meat with the onion, bay leaf, salt and one piment or peppercorn with an amount of water covering the meat. When boiling, remove the foam. Cover the pan and let it cook until the meat is tender and falling off the bone (approx. 1 hour for chicken, 2 hours for lamb). Meanwhile, prepare noodle dough. In a bowl mix the sifted flour, the whisked egg and salt, then pour water until a dough is formed. It should be not too sticky, otherwise add more flour. Wrap in plastic wrap and leave for 20–30 minutes. Afterwards sprinkle the work top with sifted flour, divide your dough into a few small balls and roll each piece of pastry into a fairly thin layer. Cut into pieces not too small and leave it dry a little.

Cut the onion into rings. Skim the top layer of fat off the broth and cook the onions briefly in this fat with a lot of freshly ground pepper. Remove the meat from the broth and separate into parts as you wish.

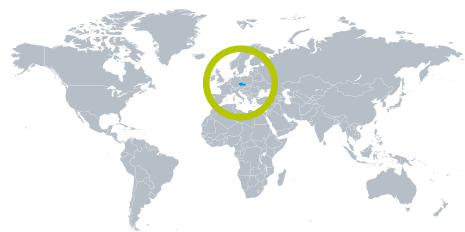
Bring the remaining broth to a boil and cook the noodles in batches in the broth for about 7–8 minutes. Sieve out the noodles (keeping the broth) and put them on a large plate. Put the pieces of meat on top and pour the previous onion/pepper mixture over it. Sprinkle some chives and parsley to garnish over the top. Strain the broth and serve in bowls as sorpa alongside the platter of Beshbarmak.

Приятного аппетита!



By Karel Prokes from the Czech Republic

“After being responsible for an instrument at BER II for many years, I am now preparing for the ‘post-neutron times’. I am also developing research perspectives for our unique 26-T hybrid magnet after the reactor shutdown.”



“The preparation of this classic Czech dish takes about 18–24 hours. But it is worth it. Bread dumplings (houskový knedlík) are served with the meat – they belong to the national culinary heritage. However, they are not easy to make, which is why they can also be bought. A portion traditionally consists of four slices.”

Svičková na Smetaně

Beef sirloin in cream sauce

Ingredients for 5 persons

- 750 g of the finest beef sirloin
- 150 g carrots
- 150 g celery
- 75 g parsley
- 1 large onion
- 50 g bacon chopped into small wedges
- 150 g butter
- vinegar
- 5 peppercorns
- 3 piment corns
- 3 bay leaves
- a pinch of thyme, lemon juice, sugar
- oil
- 100 g rough mustard (*optional*)
- 2 tbsp plain flour
- 250 ml cream milk
- lemon slices
- cranberry sauce

Make small cuts in the meat with a knife and fill with bacon. Sprinkle with salt and pepper. Place the meat in a glass or ceramic roaster. Surround with the chopped vegetables. Sprinkle with thyme, piment corns and parsley. Add vinegar, bay leaves and two tablespoons of oil. If necessary, add some water or vinegar to cover the meat. Put in the fridge for 18 to 24 hours. Turn the meat occasionally.

The next day: remove the fillet from the marinade and pat dry. Heat 2 tablespoons of oil in a pan. Brown the meat everywhere and take it out again.

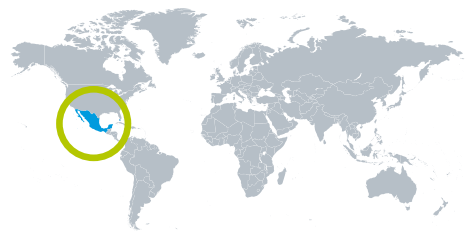
Pour some water into the pan and bring to the boil. Pour the juice as a marinade over the roast. Put butter (or lard) on the meat. Fry together with the vegetables for 1 ½ hours at 175 °C in the oven. Then drain the vegetables and liquid and puree. Meanwhile keep the meat in a warm oven (below 50 degrees). Heat the vegetable puree in a saucepan. Season with salt and pepper – optionally with mustard. Add lemon juice and sugar. If necessary, dilute with some water or beef stock. Shortly before serving, stir in sour cream (do not boil). Cut the meat into slices and serve with Czech dumplings and the cream sauce. Traditionally you put some cranberry sauce, a slice of lemon and whipped cream on the meat.

Dobrou chuť!

By Félix Duarte from Mexico



“Green energy is definitely something we should be doing. Contributing a little to this is a worthy goal in life. I am in charge of the HIKE beamline, on which deep layers in solar cells, batteries or systems for solar water splitting can be investigated with the X-ray light from BESSY II.”



Chicken Fajitas

Mexican chicken and vegetable pan

Ingredients for 4 persons

- 600 g chicken breast
- 4 tbsp olive oil
- 3 cloves of garlic
- 1 medium-sized tomato
- ½ of an onion
- 3 medium-sized bell peppers (a red-, yellow- and green-colored set)
- chicken broth powder
- salt
- pepper

Heat oil in a pan and fry garlic until it gets slightly browned. Cut chicken in 2 cm stripes. Add salt, pepper and chicken broth powder on top. Fry chicken in high heat for approximately 5 minutes, turning the chicken when necessary. Cover pan and leave it cooking on low heat for another 5 minutes.

Remove lid and introduce the sliced onions. Stir and let it cook for 1 minute.

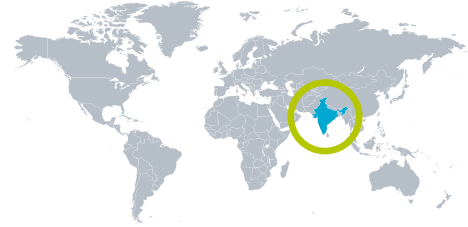
Then, add bell peppers – cut into stripes – and diced tomato into the mix, while stirring constantly. Cook until the peppers get the desired level of tenderness. Serve hot.

¡Buen provecho!



By Gauri Mangalgiri from India

“With my research I would like to contribute to a better light management in solar cells. To this end, I simulate nanostructures on the computer in order to optimize the incidence of light. Then I try out the best structures in the laboratory.”



Spicy Yoghurt Chicken

With garlic and ginger

Ingredients for 10 persons

- 10 pieces of chicken breast
- 200 g yoghurt
- 1 tbsp garlic and ginger paste
- 1 tbsp chilli powder, mustard powder, sesame powder, cloves, and cardimon
- 1 pinch of sugar
- salt
- pepper

optional:

- 1 tbsp tomato paste
- 1 tbsp tamarind paste
- minced mint or flavored cream

Chop chicken into moderate slices and sprinkle it with salt and pepper. Mix one tablespoon each of chilli powder, mustard powder, sesame powder, cloves, cardamon, garlic and ginger paste and whip it. Add a pinch of sugar.

Prepare 200 g of fresh yoghurt into a wide bowl. Add the spices mixture to the yoghurt and mix finely until all ingredients are mixed well. For more mix of sweet and sour, one tablespoon of tomato paste and tamarind paste can be added as preference.

Then add the sliced chicken pieces to the yoghurt mix. Let it marinate for at least two hours. Make sure that all the pieces are soaked in yoghurt. Heat oven to 250 °C for 10 minutes. Polish the baking tray with a thin layer of cooking oil and place the pieces on it. Cool down the oven to 200 °C and bake for 30 minutes. The chicken kebabs can be served with minced mint or flavored cream.

Enjoy your meal!

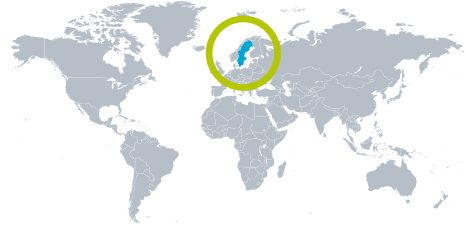




By Nils Mårtensson from Sweden



“The University of Uppsala runs a lab with HZB: the Uppsala Berlin Joint Laboratory. Together, we have developed methods for functional materials that are not available at any other research institution. They are based on angle-resolved time-of-flight electron spectroscopy. Only at BESSY II do we find light pulses with the time structure we need for researching with these methods.”



Raggmunk

Potato pancakes with bacon and cranberries

Ingredients for 6 persons

1 kg floury potatoes
1 egg
1 tbsp flour
2 tbsp water
oil
butter
salt
pepper
lightly salted bacon
500 g cranberries
200 g sugar

First grate the potatoes – e.g. King Edwards. Then mix an egg with flour and water. Add this mixture to the grated potatoes. Stir the dough, add salt and pepper.

Heat oil and butter in a pan, pour a large tablespoon of dough per buffer into the heated pan. Fry the pancake until the crust is light brown. Then turn the pancake over and fry the other side until light brown.

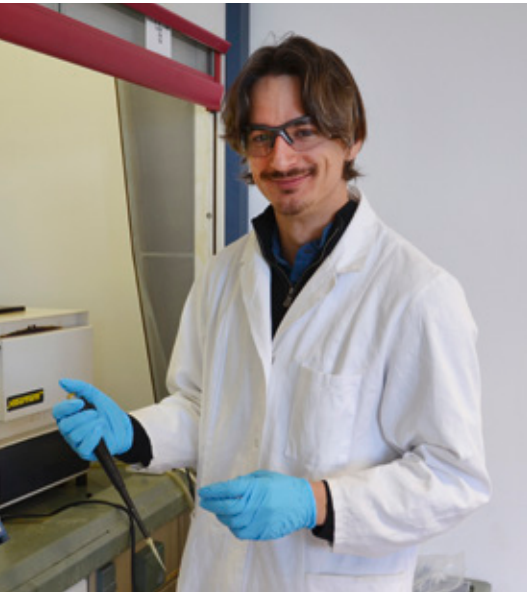
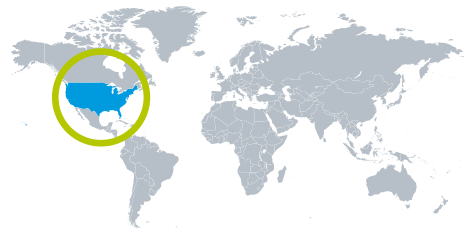
Add to the pancake lightly salted bacon and cold-stirred cranberries, which are mixed with the sugar until it has dissolved.

Smaklig måltid!



By Sean Berglund from the USA

“If we can use sunlight to produce solar fuels cheaply and efficiently, fossil fuels can be increasingly reduced. To this end, I am investigating complex material systems consisting of various semiconductor compounds that use sunlight to split water into hydrogen and oxygen.”



Twice-Baked Potatoes

With Cheddar cheese

Ingredients for 4 persons

- 4 russet potatoes – e.g. Russet Burbank
- ¼ – ½ cup milk
- ¼ cup warm butter or margarine
- ¼ tsp salt
- Dash of pepper
- 1 cup shredded Cheddar cheese
- 1 tbsp chopped fresh chives
(optional)

Heat oven to 190° C. Scrub potatoes, but do not peel. Poke potatoes several times with a fork. Bake 1 hour to 1 hour 15 minutes (until potatoes are tender when pierced in center with a fork). Remove potatoes from oven and let them cool. Then cut them lengthwise in half and scoop out the insides, leaving the brown skin as a shell. Mash the insides with a potato masher or electric mixer on low speed until there are not lumps. Add milk slowly and mash until potatoes are smooth. Add butter, salt and pepper; mash into potatoes until smooth. Stir in cheese and chives. Fill the potato skin shells with the mashed mixture and place on a cookie sheet. Increase oven temperature to 205 °C. Bake about 20 minutes.

Enjoy your meal!

By Rowan MacQueen from Australia



“I am working on solar cells to be able to use a larger part of the solar spectrum. With molecules introduced, it should be possible to convert red into blue light. Our research is also interesting for more efficient solar hydrogen production.”



Spicy Strips

Vegetables with soya

Ingredients for 2–3 persons

- 1 large onion
- 2–3 cloves of garlic (*optional*)
- 2 red paprikas
- 1 head of broccoli
- 400 g soya strips
- 2–4 tsp sambal oelek
- 1 egg
- peanut oil

Cut the onion into cubes, chop the garlic and cut the paprikas into long thin strips. Cut a head of broccoli into florets and cook the florets approx. 5 minutes.

Then heat the peanut oil in a deep-sided frying pan or a wok. Add the onion and half the sambal oelek, stir and don't let it burn. After a minute add the soya strips, then a minute later add the red paprika, broccoli florets and the remaining sambal oelek, keep stirring and keep the pan hot. Once cooked, turn the heat down, crack the egg into the pan and mix it together.

Serve it right away! This dish can be eaten with rice.

Enjoy your meal!



Quesadillas con champiñones y aguacate

Filled tortillas with mushrooms and cheese

Ingredients for 6 persons

6 tortillas/wraps
 2 onions
 500 g champignons
 250 g cheese, e.g. Gouda
 2-3 avocados
 jalapeños
 salt
 pepper
 butter

Cut the champignons and onions into small pieces. Fry them in butter and add salt and pepper. Then fold the tortillas or wraps in the middle, put some cheese inside, and place them on a pan at low heat so that the cheese melts, but the tortilla does not burn. When the cheese has melted, open the tortilla, and put the fried champignons and onions inside.

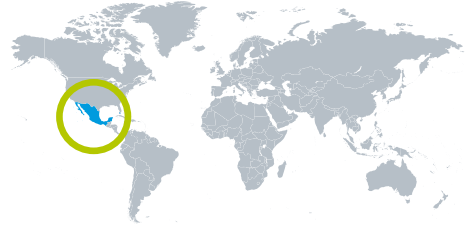
Then heat the tortillas in the oven at 180 °C so that the melted cheese fills the gaps between the champignons. Heat for a couple of minutes, and then serve on a plate, open it and put avocado and jalapeño slices in it.

¡Buen provecho!

“To make it a real Mexican snack, put some jalapeños inside the tortillas and say ‘mmh, delicioso!’ after each bite.”

By Daniel Meza from Mexico

“I investigate various material mixtures in order to optimize the electrical contact layers in solar cells. They ensure that the electricity produced by sunlight is dissipated from the solar cell. In my spare time, I perform at science slams. I really enjoy getting others excited about science.”





By Andriy Ushakov from Ukraine

“I work in the team that develops superconducting cavities for BESSY-VSR. These key components are necessary to accelerate the electron bunches. After the upgrade, BESSY II will provide light pulses of variable length for the experiments. There is no other light source in the world that can do this.”



вареники

Wareniki with sour cherries

Ingredients for 6 persons

- 250 g fresh sour cherries
- 1 cup flour
- ½ cups water
- 1 ½ tbsp vegetable oil
- salt
- 3 tbsp sugar
- butter

Prepare a dough from flour, water, oil and a pinch of salt and roll out thinly. Cut small circles out of the dough, for example with an inverted cup and a knife. Add 3 cherries and half a teaspoon of sugar to each circle. Fold the circles together (see photo) and press the edges together. Put into boiling water and leave to stand for a few minutes. Then serve the Wareniki with melted butter.

Смачного!



By Catalina Jiménez from Argentina

“I am senior scientist at the Energy Materials In-Situ Laboratory Berlin – EMIL. My current research focuses on operando synchrotron spectroscopy studies of materials for intermediate temperature Solid Oxide Fuel Cells. We want to decrease operation temperature and enhance cell performance with exsolved catalytic nanoparticles.”



“Empanadas pastries simply belong to traditional Argentine cuisine. They can be found at elegant parties, as appetizers before asado or on the streets. They are easy to store in a freezer. The filling can be anything, but beef is the most common choice in Argentina.”



Ingredients for 6–8 persons

750 g minced beef meet
4 onions (approx. 750 g), chopped
in small cubes
1 bunch of spring onions, rinsed
and chopped
50 g raisins
50 g bacon cubes (*optional*)
4 tsp olive oil
1 bouillon cube
2 tsp cumin
1 tsp hot paprika (or sweet
paprika)
2 boiled eggs, chopped in cubes
50 g green pitted olives, chopped
24 dough discs (available online
e.g. at www.latinando.de, search
for Empanadas Dough)

Empanadas

Filled pastries

Put the olive oil in a pan. Cook the onions, spring onions, raisins and bacon over medium heat for 5–10 minutes. Add salt and pepper. Add the minced meat, cumin, hot paprika and the bouillon. Let it cook for 20 minutes, stirring from time to time. Add eggs and olives and let cool down. Peel off the dough discs one at the time from the stack. Wet the borders of the discs with water. Put one disc on the palm of your hand. The wet borders should be facing you. Put 1 ½ tablespoon of filling in the middle. Close the disc, pressing the borders using the tips of your fingers. Put the empanadas on a baking tray. Paint with egg yolk. Bake them for 15–20 minutes at 180 °C in circulating air or 200 °C with conventional top+bottom heating.

¡Buen provecho!



1,440 guest researchers from
abroad use the synchro-
tron radiation source BESSY II to exa-
mine their samples. They come from 28
countries.



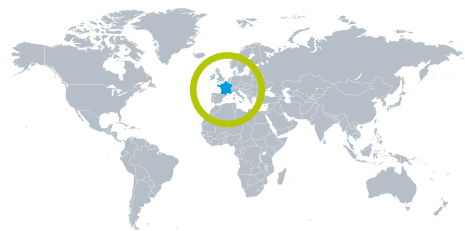
Desserts



By Catherine Dubourdieu from France



“I am the head of the ‘Institute for Functional Oxides for Energy-Efficient Information Technology’. We conduct research on functional oxide and semiconductor thin films. They are regarded as a particularly interesting class of materials for energy-efficient, cost-effective components.”



Desserts

Mousse au chocolat

Chocolate mousse

Ingredients for 4 persons

125 g dark chocolate

4 eggs

Pinch of salt



Place a small pot in a larger one filled with some water. Put the chocolate - broken into pieces - into the small pot, heat it up and melt it in a water bath. Stir until the chocolate is smooth. Separate the eggs. Remove the chocolate from heat and add the egg yolk while stirring strongly (egg yolk should not be boiled). Beat the egg whites with a pinch of salt until very stiff. Add one or two large spoons of the egg whites to the chocolate and stir to make it a little more liquid. Carefully fold the chocolate mixture into the remaining egg white. Leave to stand in the fridge for 3 hours.

Tips for the perfect chocolate mousse:

“You don’t need sugar. There is enough sugar in the chocolate itself. The egg whites must be beaten very stiffly. Take the eggs out of the fridge ½ hour before you start, they must not be too cold. Don’t forget the pinch of salt. If liquid settles under the mousse, either the egg white was not beaten sufficiently or you waited too long before eating it.”

Bon appétit!

By Fabiano Yokaichiya from Brasil

“I am instrument scientist at the neutron source BER II and responsible for the instrument E2. The topics of my research are magnetism, drug delivery systems and composite materials (e.g. cement, concrete).”



Bolo de Fuba

Corn cake

Ingredients for 12 persons

- 3 tbsp butter
- 2 cups sugar
- 3 eggs
- ½ cup flour
- 2 cups finely ground corn flour
- 1 ½ cups natural yoghurt
- 1 tbsp baking powder

Mix the butter with the sugar. Separate the eggs. Then add the egg yolk and mix everything together. Add the flour, finely ground corn flour, baking powder and natural yoghurt. Then carefully fold in the beaten egg whites. Grease the baking pan and fill with the dough. It is best to use a baking pan with a hole in the middle. Bake at 180 °C for about 45 minutes.



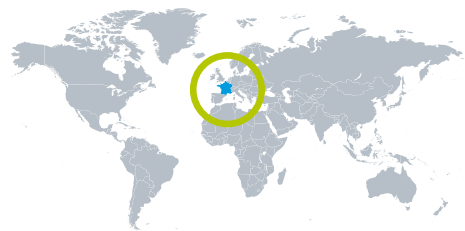
“Bolo de Fuba is one of Brazil’s most delicious recipes from the interior of the country. The cake is simple but full of variations and it lives from the creativity of the Brazilians. This recipe is from my friend Margareth Franco.”

Bom apetite!

By Sophie Spangenberg from France



“I am an event manager in the communication department and also supervise the communication activities for the Helmholtz Innovation Lab HySPRINT. I organize scientific workshops, conferences and fair presentations.”



Crêpes

French pancakes

Ingredients for 20 crêpes

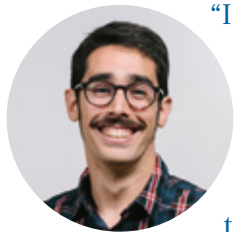
- 250 g flour
- 5 eggs
- 2 sachets vanilla sugar
- 1 pinch of salt
- 1 tbsp sugar
- 75 ml milk
- 1 tbsp oil
- 2 tbsp rum
- 1 tbsp orange blossom water

Put the eggs into a bowl. Then add flour, sugar, salt and vanilla sugar and mix. Add the milk and stir well to make the dough liquid. Then add oil, rum and orange blossom water. Let the dough rest at room temperature for at least one hour. Put a portion of dough in a greased pan and spread. Fry the first side until golden brown, then turn the crêpe in the air with one hand while holding a piece of gold in the other hand - this is what the tradition says.

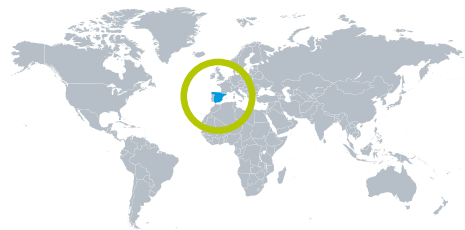
Bon appétit!

“On the 2nd of February, 40 days after Christmas, the French celebrate the ‘Chandeleur’: the day of the crêpe and the sun’s return after winter.”

By Raúl García Díez from Spain



“I investigate which electrocatalysts are suitable for water splitting. I am also setting up a new experimental facility to carry out in-operando measurements with the light from BESSY II. So we can soon collect data while the electrochemical reactions of water splitting take place.”



Desserts

Panellets

Catalan almond biscuits

Ingredients for 20–25 pieces

250 g ground almonds
200 g sugar
125 g potatoes
grated lemon peel
1 egg
60 g pine nuts

“Panellets are a sweet that is only eaten on the 31st of October for the Catalan festival ‘Castanyada’ or on the 1st of November for All Saints’ Day.”

Boil the peeled potatoes. When they are soft, drain water and crush with a fork. Then mix almonds, sugar, lemon and crushed potatoes in a bowl until a compact, homogeneous dough is obtained.

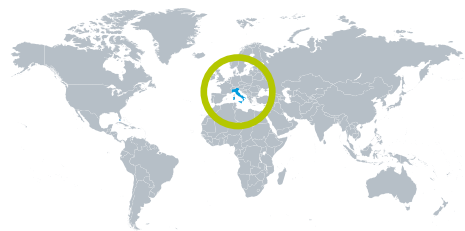
Use your hands to form balls of about 3 cm in size from the dough. Place the pine nuts in a bowl and roll the balls in it until they stick to the surface. Then brush the balls with egg. Preheat oven to 180 °C. Bake the balls for about 5 to 10 minutes until the pine nuts are brown.

Bon profit!

By Andrea Fantin from Italy



“My research topic deals with the understanding of the local crystal structure of compositionally complex alloys and its relation to material macroscopic properties such as hardness and elasticity. The local structure can be revealed by X-ray absorption spectroscopy at BESSY II.”



Tiramisu

Italian layer dessert

Ingredients for 10–12 persons

1000 g mascarpone
10 tbsp sugar
10 eggs
800 g lady fingers
espresso
some cocoa powder

Split eggs in yolk and white. Mix mascarpone with egg yolks and add sugar. Use a mixer to beat the egg whites until soft, but dense snow forms. The snow must be very dense. Test by turning the bowl upside down for a short time. The snow should not fall out. Then mix the snow with the sugar-egg-mascarpone mixture. This is called crema di tiramisu (tiramisu cream).


Dip the lady fingers in fresh espresso. Fill a bowl alternately with a layer of tiramisu cream and a layer of espresso lady fingers. End with a layer of tiramisu cream and sprinkle with cocoa powder. Put in the fridge and wait at least one night.

Buon appetito!


“If you have done a good job, the bottom layers should not be liquid. If they are just liquid, invite me over for a coffee and we can solve the problem while tiramisu-tasting.”

10 YEARS OF HZB

We have released this recipe book on the occasion of the 10th birthday of Helmholtz Zentrum Berlin. It formed in 2009 from the fusion of the Hahn-Meitner-Institut and BESSY GmbH. Now, the HZB is part of an excellent international network and attracts researchers from all over the world.

Before  Now
the fusion

Data basis: 2008 ("Before the fusion") and 2017/2018 ("Now").

9  32
Professors

Thanks to joint appointments, HZB has raised its scientific profile sharply and now benefits from the excellent university research environment in Berlin and beyond.

85  252
Cooperatives in science

HZB has tripled the number of cooperative projects in the past ten years. Now, HZB holds contracts with more than 250 scientific establishments over the entire globe.



1 January 2009
Fusion and founding of
Helmholtz-Zentrum Berlin



30 March 2011
Competence Centre
for Photovoltaics –
PVcomB opened



1 October 2012
BESSY II runs in
top-up mode




5 May 2015
High-field
magnet for neutrons
inaugurated

1  9

Young investigator groups in research

Nine highly successful young investigator groups are now researching at HZB, three of which are working on perovskite solar cells. Young talents are offered outstanding opportunities to form their own teams.

1,064  3,750

Attendances of School Labs

The number of school student project days and teachers courses rose sharply: 3,750 people attended the HZB School Labs in Wannsee and Adlershof in 2019 (first opened in 2010).

900  1,155

Employees

900 people formerly worked at the two predecessor institutions: BESSY employed 230 people and the Hahn-Meitner-Institut 670. Now, there are 1,155 people working at Helmholtz-Zentrum Berlin.

64  104

PhD students

At the end of 2008, 46 PhD students contracts with the Hahn-Meitner-Institut and 18 with BESSY GmbH. Now, there are 104 PhD students employed at HZB. Including scholarship fellows or PhD students holding contracts with universities, this number even comes to 151 people.



10 September 2015
Groundbreaking
for bERLinPro
accelerator hall



31 October 2016
Energy Materials
In-Situ Lab Berlin –
EMIL opened



6 February 2017
3,000th eye tumour
patient treated
with protons



1 June 2017
Green light for
upgrading BESSY II
into BESSY VSR



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